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36th Annual Conference

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June 21-26, 1959

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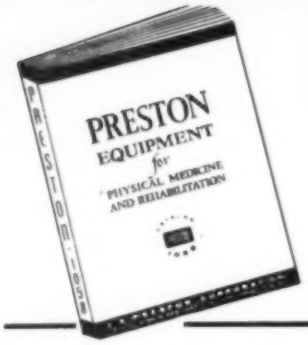

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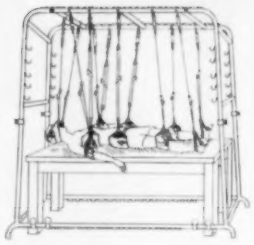

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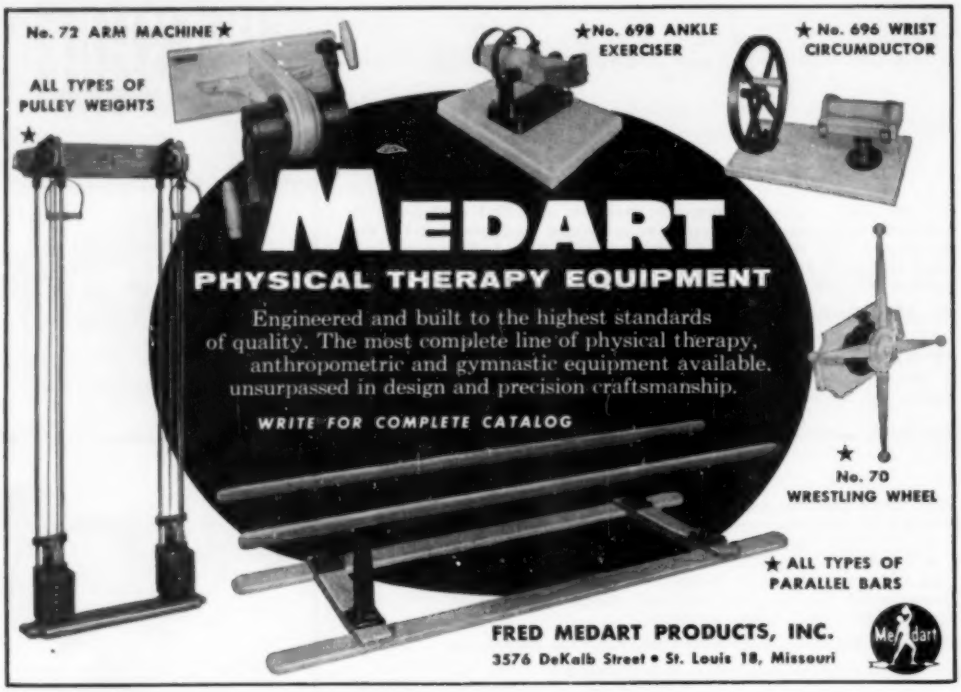
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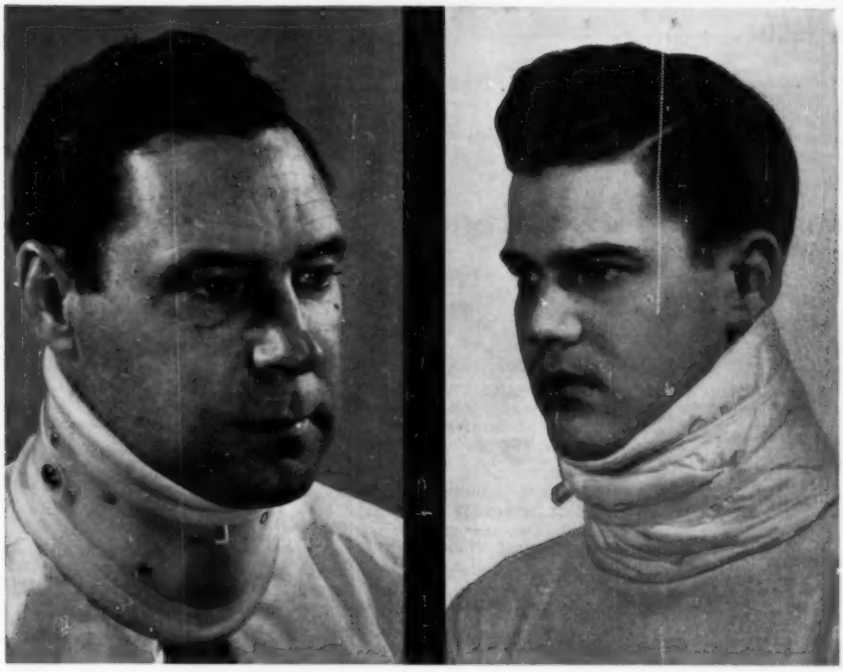

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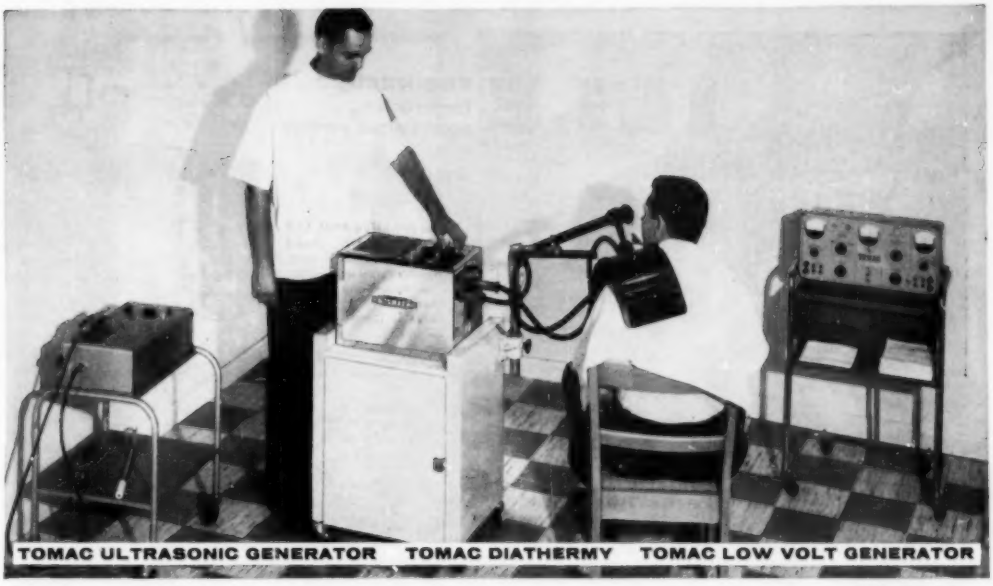

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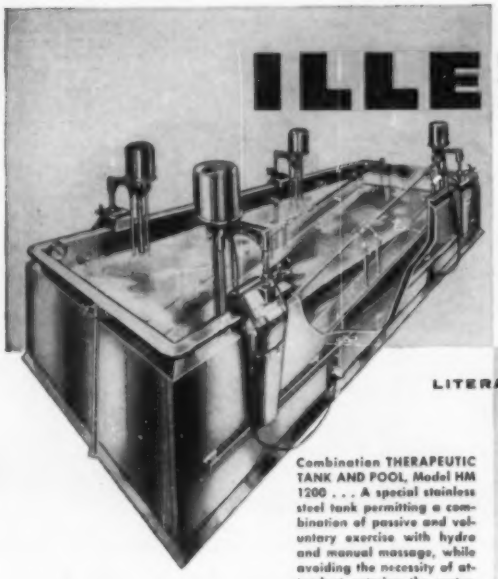

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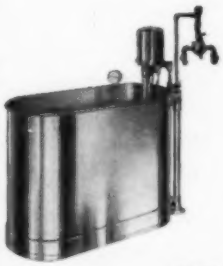

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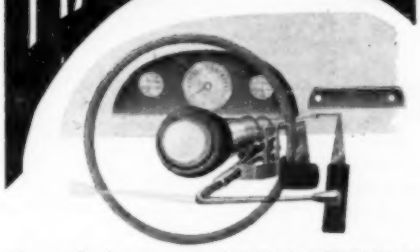

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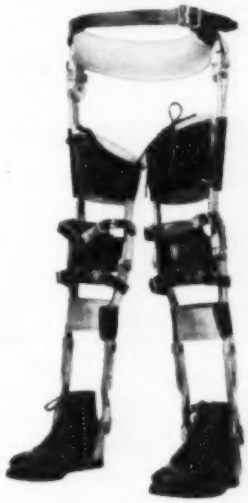

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Arkansas*: Apply to Joe Verser, M.D., Sec., Board of Physical Therapy Examiners, Harrisburg.

California*†: Apply to State Board of Medical Examiners, 1020 N St., Room 530, Sacramento 14. Examinations held in Los Angeles and San Francisco. SPECIFY REGISTRATION FORM

Connecticut*†: Apply to Sarah C. Johnson, Sec., 165 Capitol Ave., Hartford. Examinations held in Hartford.

Delaware*†: Apply to State Examining Board of Physical Therapists, Dover.

Florida*†: Apply to Homer L. Pearson, M.D., Sec., State Board of Medical Examiners, 901 N.W. 17th St., Miami 36.

Georgia*: Apply to C. L. Clifton, Joint Sec., State Examining Boards, 224 State Capitol, Atlanta.

Hawaii*†: Apply to Department of Health, Territory of Hawaii, Honolulu.

Illinois: Annual examination, third Friday of October. File applications 15 days in advance. Apply to Judge Vera M. Binks, Director, Department of Registration and Education, Capitol Building, Springfield. Examinations held at 160 No. La Salle St., Chicago.

Indiana: Annual examination, Mid-June. File applications by May 15. Apply to Ruth V. Kirk, Exec. Sec., State Board of Medical Registration and Examination, 538 K. of P. Building, Indianapolis 4. Examinations held at Indiana University Medical School, 1100 W. Michigan, Indianapolis.

Kentucky: Semiannual examinations, April and October. File application by March 1 or September 1. Apply to Eloise Draper, Sec., State Boards of Physical Therapy, 226 E. Chestnut St., Louisville 2. Examinations held in Frankfort.

Maine: Thrice yearly examinations, March 10, July 14, November 10. File application 10 days in advance. Apply to Adam P. Leighton, M.D., Sec., Medical Examining Board, 142 High St., Portland. March and November examinations held at Portland City Hall, Portland; July examination held at State House, Representative Chambers, Augusta.

Maryland*: Apply to State Board of Physical Therapy Examiners, 2411 No. Charles St., Baltimore 18.

Massachusetts†: Semiannual examinations, April 14 and October 13. File application by March 31 or September 29. Apply to Board of Registration in Medicine, State House, Boston 33. Examinations held at State House, Boston.

Minnesota*: Apply to State Board of Medical Examiners, 230 Lowry Medical Arts Building, St. Paul 2.

Nebraska*: Apply to Husted K. Watson, Dir., Bureau of Examining Boards, Room 1009, State Capitol Building, Lincoln.

Nevada*†: Semiannual examinations. Apply to Margaret Heidrick, 506 Humboldt St., Reno. Examinations held in Reno or Las Vegas.

New Hampshire*†: Apply to Edward W. Colby, M.D., Sec., Board of Registration in Medicine, 61 So. Spring St., Concord. Examinations held at State Health Building, 61 So. Spring St., Concord.

New Mexico*: Apply to Registrar, Physical Therapists Licensing Board, Box 2206, Santa Fe.

New York: Semiannual examinations; June 23-24, December 8-9. File applications at least 30 days in advance. Graduates of registered curriculum apply to John W. Paige, Chief, Bureau of Professional Examinations and Registrations, 23 South Pearl St., Albany 7; graduates of nonregistered curriculum apply to Robert C. Killough, Jr., Assistant Commissioner for Professional Education, 23 So. Pearl St., Albany 7. Examinations are held in Syracuse and New York City.

North Carolina*†: Semiannual examinations, April and October. Apply to Margaret L. Moore, Sec., State Examining Committee of Physical Therapists, North Carolina Memorial Hospital, Chapel Hill. Examinations held at University Testing Center, School of Education, University of North Carolina, Chapel Hill.

Oklahoma*: Apply to Lucy Haidek, Exec. Sec., Board of Medical Examiners, Braniff Building, Oklahoma City. Examinations held at Board of Medical Examiners, Braniff Building, Oklahoma City.

Pennsylvania†: Semiannual examinations, January and July. File application December 15 or June 1. Apply to Marguerite Glass Steiner, Sec., State Board of Medical Education and Licensure, Box 911, Harrisburg. January examination held in Philadelphia; July examinations held in Philadelphia and Pittsburgh.

South Carolina*†: Apply to Ruth S. Linley, Sec., State Board of Physical Therapy Examiners, 319 Walker St., Columbia.

South Dakota*†: Apply to John C. Foster, Exec. Sec., State Board of Medical and Osteopathic Examiners, 300 First National Bank Building, Sioux Falls.

Tennessee†: Annual examination, second Monday in June. File application one month in advance. Apply to State Board of Medical Examiners, 1635 Exchange Building, Memphis. Examinations held in Nashville.

Vermont*†: Apply to Sophie Myers, Sec., Board of Physical Therapy Registration, Degoesbriand Memorial Hospital, Burlington.

Virginia: Semiannual examinations, February and September. Apply to State Board of Medical Examiners, 631 First St., S.W., Roanoke. Examinations held at Medical College of Virginia, Richmond.

Washington†: Annual examination, May. File applications by April 1. Apply to Professional Division, Department of Licenses, Olympia. Examinations held in Seattle.

Wisconsin*: Thrice yearly examinations, April 2-3, Mid-September and at discretion of Examining Committee. File applications at least two weeks in advance. Apply to Emma Zitzer, Sec., Physical Therapy Examining Committee, 207 North Brooks St., Madison 5. April examination held in Milwaukee; September examination held in Madison. Third examination to be scheduled.

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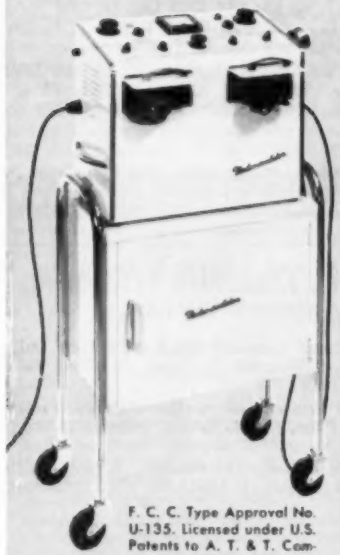
* Information regarding examination dates and/or place of examination will be provided upon receipt of application.

† Examination provided by Professional Examination Service, American Public Health Association, 1790 Broadway, New York 19, New York.



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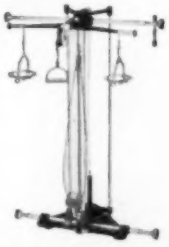

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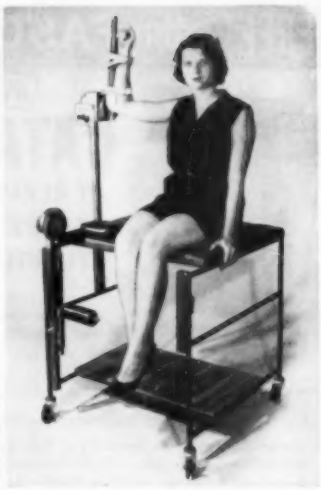

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The Physical Therapy Review

Official Publication of The American Physical Therapy Association

Auxiliary Personnel in Medical Practice*

John L. Caughey, Jr., M.D.

It is not necessary or desirable for me in the limited available space to attempt a detailed discussion of the way auxiliary personnel are related to medical practice. The military services have defined literally hundreds of medical categories in which their personnel are subdivided, and in civilian life we have several dozen kinds of health workers, other than physicians. I shall discuss three types of personnel who contribute to medical care. These are the laboratory technician, the medical social worker, and the physical therapist. On the basis of these illustrations I will make some generalizations about such contributions and draw some conclusions.

The *laboratory technician* is an ubiquitous associate of modern medicine. If the physician today had to carry out all the laboratory determinations which contribute to a diagnosis and enable him to follow the progress of the patient under treatment, he would have no time for anything else. Of course, if the physician had to do them all the number of tests done would be much smaller, but even if the volume were cut down to include only those that are distinctly necessary or desirable, the physicians of the country would have little time to see their patients.

However, any one who has worked closely with laboratory technicians would not explain their use only on the basis of the doctor's time. There is no doubt, whatever, that a very large number of technicians develop a competence and efficiency in routine work which far exceed that of most physicians. Certainly the accuracy of a good technician in an accustomed procedure is greater than that of the physician who does the same procedure rarely. One charactristic of medical technology is that it is subject to unlimited subspecialization. Through this device even very complicated tests can be accurately done because of the concentrated experience of the technician assigned to that task.

It should be emphasized that when we speak of "routine" or "accustomed" procedures, we do not mean unimportant. The responsibility of the laboratory technician in modern medical practice is enormous. The physician has been trained to place great reliance on the data which come from laboratory tests. His whole attitude toward diagnosis and treatment may be influenced by the report of a single chemical test of some blood constituent. Whether we have more veneration than is desirable for such quantifiable approaches to medicine may be debated; but there is no doubt that an erroneous report is worse than none, since it gives the physician a false direction, which might have been avoided if he depended only on clinical judgment; and in such things as testing blood for transfusion, faulty technic may produce a lethal result.

In summary then, the laboratory technician, although not expected to exercise individual judgment about the methods she uses or the

Associate Dean, Western Reserve University School of Medicine, Cleveland, Ohio.

This paper was presented before the Dental Health Section of the American Public Health Association at the Eighty-Fifth Annual Meeting in Cleveland, Ohio, Nov. 11, 1957.

* Reprinted with permission from *American Journal of Public Health*, Vol. 58, No. 8, August, 1958.

results she obtains, has responsibilities of great importance in medical practice. Very often through concentrated experience in routine procedures she develops efficiency of remarkable proportions. Irresponsible behavior by a laboratory technician would produce temporary chaos in a modern hospital.

The *medical social worker* is an associate of relatively recent vintage in medical practice. In little more than 30 years she has established herself in most large medical centers, but relatively few have found a role in connection with the practice of individual physicians outside of hospitals.

It is of some interest to note that medical social workers must have four years of college study and two years in graduate school to qualify for official recognition. Special emphasis should be placed on the fact that social case aides and other relatively untrained personnel may be used in hospitals and community agencies under titles which obscure the fact that they are not qualified medical social workers.

The medical social worker contributes to medical practice in three principal areas: (1) by studying the way personal environmental factors bear on the individual patient's illness; (2) by assisting the patient and his family to understand and adjust to the problems associated with his illness; and (3) by using expert knowledge of community health resources to help the patient or his family make effective contact with the agencies or individuals able to provide the needed services.

It is obvious that to accomplish these tasks, the medical social worker must, among other things, make effective personal contact with patients and their relatives, must have good understanding of the reactions of patients and their associates to disability, must communicate well with physicians to learn the nature and progress of the patient's illness, and must know and work closely with all the health and welfare agencies of their community.

Although individual physicians may do any of the above tasks well, it would be a rash observer who would say that the only reason all doctors do not take care of all these items well is because they do not have enough time. There are certainly special qualities of tact and patience necessary to help patients and families discuss their feelings and their problems, and to bring about constructive adjustments to real and heavy burdens. Good medical social workers have worked hard to develop these qualities, and to gain the knowledge necessary to guide the patient through the complex maze of health agencies in a modern urban community.

In summary, the medical social worker has professional responsibility in complex interpersonal and community relationships. She must exercise great judgment and tact, and apply to the individual patient's problems special knowledge, experience and skill.

The *physical therapist* has been an important contributor to medical practice for a long time, but his precise role is still not clear, and is even now a matter of some controversy. This is in part due to the variety of educational programs which have been available, and which produce graduates who vary considerably in maturity, knowledge, and capacity for assuming responsibility.

However, the major reason for confusion about the role of physical therapists is confusion in the attitudes of physicians about the way physical therapists should function.

On the one hand there is a group of specialists, primarily orthopedic surgeons and more recently physiatrists, who know a lot about physical therapy. They may be quite definite about exactly what kind of treatment they want for their patients and how they want it given. It is natural for them to write very specific prescriptions for the guidance of physical therapists. Under these conditions the therapists function primarily as technicians, exercising little independent judgment and carrying out the physicians' orders in the prescribed manner.

On the other hand, there are physical therapists who work in a clinical situation in which there is no specialist well versed in all modalities of physical therapy and able to appraise accurately the details of the patient's progress under such treatment. In this kind of a setting it is incumbent on the therapist to work with general physicians, to advise them about the best modalities of physical therapy applicable to the particular patients, and to keep them informed about the way the patient is responding to treatment.

As a former medical director of a rehabilitation center, I can say that I have the greatest admiration for the knowledge, skill, and judgment of well trained physical therapists. As a medical educator, I can say that I see no possibility that we can ever hope to give all medical students the kind of knowledge about the musculoskeletal system that experienced therapists have; and also that I see no possibility that we can increase the number of orthopedic surgeons and physiatrists to assure that all patients who can benefit from physical therapy will have access

to one of these specialists who is capable of writing an exact prescription for physical therapy.

In summary, then, the role of physical therapists today is in a confused state, largely because there is difference of opinion among doctors about how they should function in relation to medical practice. This confusion must be resolved so that appropriate educational programs and measures of competence can be developed for physical therapists in whatever categories may be necessary to assure effective service to all patients who need their help.

It is easy for professional health workers to become so engrossed in their daily, demanding tasks that they forget to take time to reflect on the evolution of their profession or to assay and redefine their profession's objectives in a changing world. I shall do no more than to call your attention to the fact that only 50 years ago for a large portion of our population health services meant what an individual physician, often poorly educated by modern standards, could do with no more aid than he could get from his black bag, and the patient's family or some helpful neighbors. It is a far cry from that to the kind of resources most physicians have available to them today in the modern hospital and the organized health agencies of their community.

This evolution in medical care has come about primarily for two reasons: First, the tremendous advances in knowledge about the causes, prevention, and treatment of disease; and second, the increased demand for health services made by an informed public whose social conscience dictates that its goal shall be best possible care for all citizens.

Although it is tempting to dilate further on these factors, I shall go directly to some of the principles about auxiliary personnel which emerge from consideration of the developments in health services during these past 50 years.

1. As new knowledge and skills are made available, health services inevitably become increasingly complex and expensive. Optimum care cannot become distributed widely to all citizens unless progressively more efficient and economical ways are found for delivering needed services to the individual who will benefit from them.

2. The scope of health services has become so broad that no one person has all the knowledge, skills, and attitudes necessary to do every health service job better than others can do it. Use of auxiliary personnel should not be based on the idea that delegation of function is done only to save the time of some mythical paragon who could do every job magnificently if he were not busy doing something else more important. Positive emphasis should be placed on the need for many people with a variety of aptitudes, skills, and backgrounds to do the many different tasks that contribute to comprehensive health service.

3. Although nothing can transcend the importance of the individual professional relationship with a patient, there is real danger that this relationship will break down unless it can be integrated successfully into an efficient system for comprehensive health services. Such integration will require dynamic leadership characterized by:

a) fullest possible use of the talents of a variety of health personnel,

b) effective integration of the efforts of all personnel working with an individual patient,

c) continuing reassessment of the tasks to be done and the most efficient and economical means by which they can be done well.

4. High quality comprehensive health services can be provided economically today only under conditions which assure demand for a large volume of such services. The many kinds of equipment and personnel that are needed mean a large expense for the community. This can be justified only if the facilities and skilled workers are fully utilized and the cost per unit of service kept at the lowest possible level. This means that some organized way must be found to make available readily those facilities and services which the clients of the individual practitioner need, but which the volume of his practice does not permit him to maintain. The hospital and group practice have emerged as partial solutions of this problem in medical care.

5. It is not possible to use any kind of auxiliary personnel effectively in practice until it is decided whether individuals in a particular category are to function as technical assistants or professional associates. In general, the technician does a prescribed task under close supervision and exercises no independent judgment about the methods or the results. A professional role is more difficult to define but includes the following elements:

a) A special area of knowledge and skill,

b) a meaningful personal relationship with the patient,

c) sincere dedication to the best interests of the patient,

d) freedom to exercise independent judgment within the assigned area of professional responsibility,

e) recognition of limits of personal competence and willingness to seek assistance outside these limits.

6. There is nothing more fruitless than trying to define the role of health service personnel in absolute terms. In every instance the function of a particular worker will depend on the needs of the patient and the other kinds of personnel reasonably available in the community. Perhaps the best compromise is to say that no health worker should render service to a patient if there is someone else readily available who can do it distinctly better. It is certainly not constructive to set up a rigid definition of the function of a particular worker based on the resources of a large, teaching hospital, and expect the same limitations to apply in an undeveloped area without specialized health personnel.

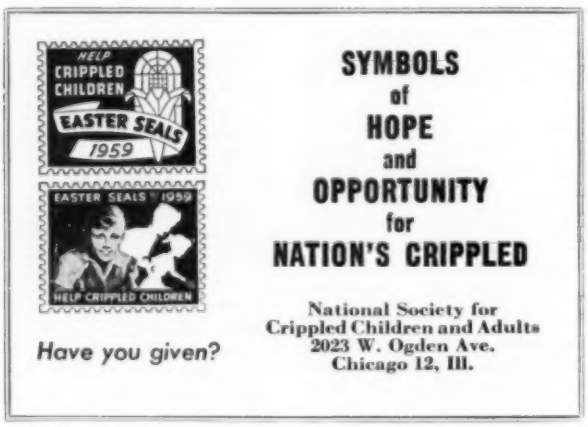
An informed public will eventually get the kind and amount of health services it wants. It seems clear that if professional workers in the health fields do not provide leadership in making comprehensive health services broadly available, the impetus will come from outside the health professions, through the activity of government agencies, hospitals, labor unions, fraternal organizations, school systems, and other groups.

If effective leadership does develop in the health professions, looking toward a vigorous effort to make comprehensive care available on a wide scale, its first task should be to seek truly functional definitions of the roles of health service personnel to assure that:

1. Professional responsibility for the exercise of judgment in service to patients will be in the hands of properly educated persons who have truly professional attitudes toward their responsibilities.

2. Full use will be made of the talents of a variety of health service personnel, so that there can be appropriate roles with areas of independent responsibility and action for persons with professional education and attitudes, and appropriate recognition of the superior skills of the well trained technologist under proper supervision.

3. A research approach will be made toward the problems of health services so that basic data will be available for continuing reevaluation of the quality of care, the kinds and numbers of personnel needed, and the most effective way to use them in a complicated group effort.



*Physical Therapy for the Meniscectomy**

Royce P. Noland, B.A., and Corinne Q. Way, B.S.

Statistics have shown that carefully controlled handling of the meniscectomy patient, pre- and postoperatively, can accelerate the process of total rehabilitation and decrease the possibility of recurring effusion, permanent damage, and irreversible instability.

This report summarizes our observations of a study group of 30 cases operated on at the U. S. Public Health Service Hospital, San Francisco, and followed in physical therapy through their entire course of treatment. The treatment course was as follows: (1) preoperative, (2) immediate postoperative, (3) intermediate postoperative, and (4) convalescent.

Preoperative

Twenty-one of these 30 cases had at least one physical therapy treatment prior to surgery. This treatment included three important procedures:

1. The patient was introduced to the therapist, and the therapist had the opportunity of explaining the physical therapy program to be used in his course of treatment;
2. Range of motion and if possible, a 1 RM (repetition maximum) and a 10 RM were recorded. Resistive exercise potential was omitted if the knee was locked, painful, or edematous. Active range of motion was always measured and recorded;
3. The patient was instructed in the movement of quadriceps "setting" (static contraction), a procedure too often neglected in the treatment of this condition. It is an uncommon skill and difficult for many patients to learn. Substitution by the hamstrings and gluteal muscle group is common. Careful observation and instruction by the therapist are vital for the effective use of this procedure by the patient postoperatively.

Postoperative immediate

On the first postoperative day, the ward therapist initiated physical therapy twice a day. Positioning of the leg was checked. To minimize the static position of slight flexion at the knee, a pillow was placed from the knee distally to the heel. The femoral segment of the leg was left suspended. Quadriceps "settings" were then initiated. The length of time devoted to treatment was determined by the ability of the patient to perform this exercise effectively. He was then instructed to perform this "setting" at least 10 times every hour.

Slight active motion began on the second or third day. Inasmuch as this program was geared toward attaining the last few degrees of extension, it was not deemed wise to institute flexion exercises or straight leg raising unless the *total* quadriceps complex was functioning and coordinating normally. In this program straight leg raising was rarely used.

Postoperative intermediate

Barring complications, most patients were given crutches on the third or fourth postoperative day. They used a nonweight-bearing

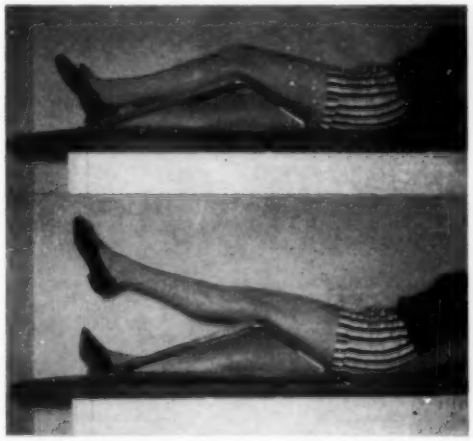
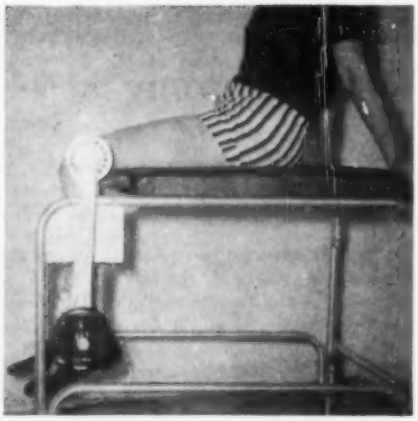


Figure 1—A and B

From the Physical Therapy Department of the U. S. Public Health Service Hospital, San Francisco.
Royce T. Noland, Staff Therapist; Corinne Q. Way, Chief Therapist. Miss Way died Nov. 4, 1958. At the time of her death she was Assistant Chief, Physical Medicine and Rehabilitation Branch of the U. S. Public Health Service, Washington, D.C.

* Presented at the 34th Annual Conference, American Physical Therapy Association, Detroit, Michigan, June 1957.



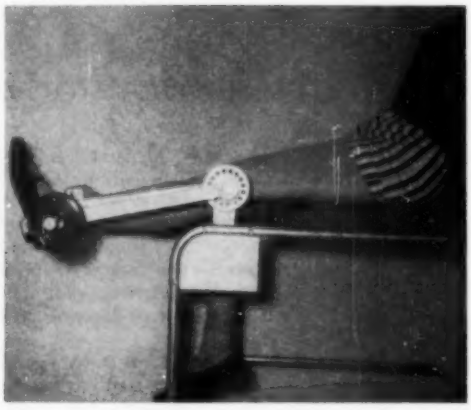


Figure 2A and *Figure* 2B

gait and were transferred to the physical therapy clinic on a twice a day program.

Quadriceps "settings" were continued. Meanwhile, use of the quadriceps board for active knee extension was initiated (Fig. 1). Restrictions caused by the bandages, pain, and edema governed the amount of flexion allowed.

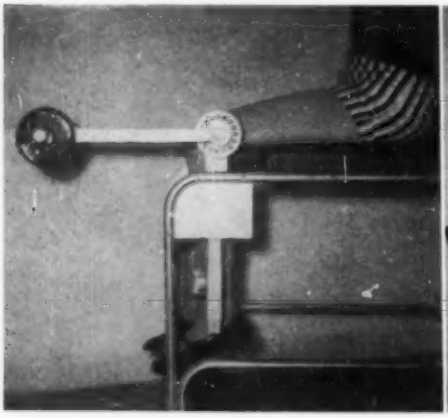
As a general rule, sutures and bandages were removed on the eighth or ninth postoperative day. The first goniometric measurement of knee extension was then obtained. Sandbag resistance was started on the knee board and then progressed as the patient assumed a sitting position over the end of the table. Emphasis was placed on complete extension. Resistive or forced flexion was minimized.

When edema had subsided and the patient could actively extend the knee to at least 170 degrees with a 7 pound sand bag, he progressed to the N-K Exercise Table.

Convalescent treatment

The concept of progressive resistive exercise used in this study was more than knee extension with the maximum load. For every repetition it was necessary to extend with a load that could be carried through the maximum *active* extension. Stress was on full range of motion with progressive resistive exercise indicated only as it affected the range.

In order to use more than one pattern of resistance, a device versatile enough to accommodate several resistance patterns was necessary.[1]



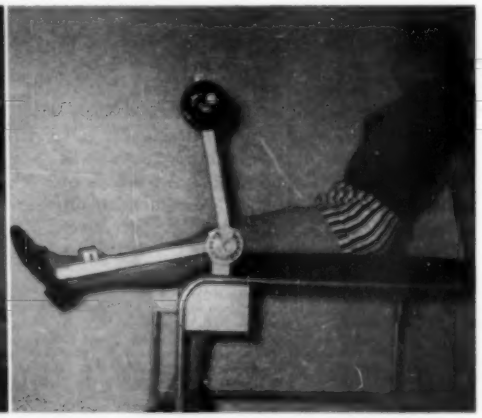


Figure 3A and *Figure* 3B

Figures 1 and 2 illustrate the equipment and procedures used.

The basic components of this equipment are two lever arms. The relationship of the two arms can be adjusted to accomplish the variable in the quality of resistance needed or required. When the resistance arm (weight arm) is in the horizontal position maximum resistance is experienced by the quadriceps. As this arm approaches a vertical position the effective resistance diminishes.

Figure 2A shows the patient in position for resistive exercise with a pattern of *increasing resistance*. With the knee approximately at the 90 degree position virtually no resistance is being experienced as the knee approaches maximum extension. Figure 2B shows maximum resistance being experienced as the knee approaches maximum extension.

Figure 3A shows the patient in position for resistive exercise with a pattern of *diminishing resistance*. With the weight arm in a horizontal position maximum resistance is experienced in the beginning of the exercise. Figure 3B shows that resistance diminishes as knee extension is accomplished. The work requirement on the quadriceps is diminished when the resistance arm approaches a vertical.

Figure 4 shows the indicator on the exercise device. The patient was required, on each repetition, to attain his maximum range as recorded on this indicator. The 30 repetition method of 10 RM (½, ¾ and full) was used for both the increasing and diminishing resistive patterns. Heavy resistance was discontinued if there was evidence of effusion. When edema was no longer prevalent heavy resistance exercises were resumed.

DISCUSSION

A study of 30 meniscectomies was made from a group of 246 patients with varied conditions involving the knee joint.

The patients' ages ranged from 19 to 63 years with an average of 38 years. The calendar days that the patients were under treatment were 18 to 98 days with an average of 54. (Calendar days referred to total days under treatment including week ends. Actual treatment was on a 5 day basis.) At the time of discharge, the IO RM ranged from 17.8 to 48.8 pounds with an average of 33.3 pounds.

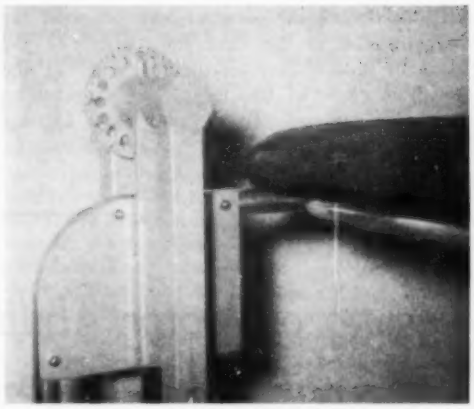


Figure 4

One of the primary purposes of this comparative evaluation was to attempt to determine under which pattern of resistance the range of motion could be gained more rapidly. Table 1 illustrates the comparative results between cases using the *diminishing resistance* pattern and the *increasing resistance* pattern. The results show a significant difference in the time required to attain full range of motion when using the two technics. The authors feel that the *diminishing resistance* pattern is the procedure of choice.

Table 2 compares three procedures or combinations of procedures. Without preoperative instructions an average of 42 treatment days was required. The average treatment days were lessened to 37 when the patient received preoperative instruction. When the patient received preoperative instructions *and* diminishing resistance the average treatment days were further reduced to 32.

Therefore, two specific procedures that deserve emphasis in attaining range of motion and are

TABLE 1.

CALENDAR DAYS FROM SURGERY TO FULL RANGE OF MOTION

	Mean
Without preoperative instructions	42
With preoperative instructions	37
Both preoperative instructions and diminishing resistance	32

TABLE 2.

CALENDAR DAYS FROM START OF PROGRESSIVE RESISTIVE EXERCISE TO FULL RANGE OF MOTION

Increasing Resistance Pattern		*Diminishing Resistance Pattern*
38	Mean	18
29	Median	15

considered integral parts of any program for rehabilitation of the knee joint are: (1) the value of preoperative instructions and (2) the potential value of the technic of diminishing resistance exercise. To the authors it appears that the technics presented are worthy of clinical utilization.

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*Testing of Motor Abilities**

Helen Vaughn, B.A.

The trend of treatment today is to consider the whole patient in terms of what we can do to help him gain maximum recovery and independence. To accomplish this we must think of him in terms of his status at the beginning of treatment, the prognosis, the plan of treatment, and the progress noted under this plan. There must be mutual understanding between physician and therapist regarding terminology used as well as what information the physician expects from the therapist. The amount and type of information will vary. In some situations good understanding between therapists and physicians is easy to accomplish, but in too many others it is extremely difficult. There are a number of reasons for this, but prominent among them are the lack of uniformity in terminology and the lack of objective means of testing for strength and motor ability. Unfortunately, another reason is that physicians have found that the tests of some therapists are not as accurate as they might be. It should be a matter of professional pride that we be able to provide *accurate and meaningful* information when it is requested of us.

As therapists we consider muscle evaluations from two viewpoints: first, for our own use as guides to planning of specific treatment routines, and to determine the success or failure of these routines; second, to provide the physicians with whom we work with information which will be helpful to them in diagnosis, prescription for treatment, prescription for bracing, and determination of progress and prognosis.

In testing we must think first of the things we want to find out about the patient. Whether the test is being done to provide information for the physician or to aid the therapist in determining treatment technics, there are certain specific things which we want to know. These are:

Is the muscle active?
Is the muscle functional?
How functional is it?
Is spasticity present?
What substitute patterns are present,
What positions the patient assumes at rest,
What positions the patient assumes on activity,
What deformities are present and to what degree,
What stage of motor development has been reached,
What are the specific motor handicaps which keep him from developing more rapidly or becoming more independent.

To obtain this information we must have certain basic knowledge and skills which enable us to devise tests and to record information which will have meaning. The therapist must have a thorough knowledge of functional anatomy, be able to recognize deviations from normal alinement, know developmental patterns of children, recognize abnormal patterns of motion, recognize reflex patterns, and know how to utilize them in testing and treatment. In addition, the therapist must be able to convey to the patient what is expected of him in a testing procedure, and then be able to record the results of the test in a concise way.

Testing by a well trained therapist saves time for the physician, and can be of great help to him. We must remember, however, that tests are of value to the physician only if they are accurate and if the results can be easily understood by physicians and other therapists. The best test in the world is valid only if the person administering

Coordinator of Physical and Occupational Therapy, Bureau of Maternal and Child Health, District of Columbia.

* Presented at the Annual Conference of the American Physical Therapy Association, Seattle, 1958.

it knows what he is doing and is able to interpret his findings. We must have objective tests and be so accurate and skillful in administering them that our results can be relied on in planning for patient care.

There will be no discussion of specific types of tests and forms used, since they are determined by the needs of each treatment facility. In some situations all that is required is the filling out of a muscle test form or motor development form. This is not difficult, but often requires interpretation. As an added time saver for the physician the therapist may summarize the test findings and briefly state the pertinent details. The most satisfactory situation is the one in which the therapist and physician see the patient together following the completion of the test, since this offers the opportunity for a better exchange of information and a better starting point for a reasonable treatment program if indicated.

It is easier for physical therapists to visualize testing as a criterion for planning and carrying out of a treatment program, and for observing the patient's progress. Objective testing done at stated intervals serves not only to record progress, or lack of it, but gives us an excellent opportunity to evaluate the technics used. It also gives information needed to report intelligently to the physician on the status of the patient. We need factual material to back up statements regarding progress, and unless the progress is obvious, the only way to secure this information is by administering periodic tests.

The test most familiar to all of us is the routine manual muscle test. Some of these go into great detail in testing individual muscles and others simply test groups of muscles without attempts to isolate individual muscles. The type of test varies with the need of the facility using it. Although there are many different forms of manual muscle tests, this test has been more standardized than others and is more objective if done by a well trained therapist. We must keep in mind how the test results are to be used and be guided accordingly. A detailed test can serve for any purpose, but a more general one may not give you or the physician the necessary information.

Tests used in cerebral palsy and other upper motor neuron problems are not as easily understood or administered as the routine muscle strength test. So much information is needed that it is difficult to devise a test which will present all of it in a concise form which can be easily read and understood. Again we must consider what we want to know about these patients. We want to know where there is spasticity and to what degree, where there is flaccidity, where there is reflex action, where there are zero cerebral muscles, what habitual postures are assumed at rest and in activity. In the evaluation of a patient with spasticity we are presented with complex problems. Our method of testing, as in other types of tests, needs to be such that subjective opinion can be kept to a minimum. Little changes are easy to see when one works with a patient and looks for improvement, but it is difficult to translate these small changes into specific factors which will have meaning to another therapist or to a physician. These changes may be significant, yet we can be misled by them unless we have a yardstick which measures progress, however slight it may be. In motor development tests we have the accomplishments of a normal child as a yardstick and test items which tell us what we can expect a normal child to do at given stages of development. We also know that although all children do not develop at the same rate, all do go through certain stages of development. The results of the test show us what stage of progression has been reached and serve as excellent guides in planning treatment routines for each patient. They point up the items which cannot be accomplished and those which are needed to get the patient to the next stage of development. If tests show that the child has reached a level equivalent to the normal accomplishment of only three months, we know that the next step is to teach him to roll over and to start working toward supported sitting and creeping positions. Regardless of chronological age he is not yet a candidate for standing and walking. Individual test items indicate just what activities must be used to accomplish the progression. In evaluating the patient we must be aware of the total physical problem so that we recognize when the patient has reached a developmental plateau. Surely a series of motor development tests combined with an evaluation of strength, spasticity, and deformity will serve to determine just how much additional progress can be expected. In starting a treatment program a test is helpful in determining specific aims of treatment and, as treatment progresses, periodic tests provide us with a re-evaluating of treatment given and justification for continuing, changing procedures, or stopping treatment entirely.

Testing in each situation has to be tied into the type of treatment being given. The important point is to have tests which satisfy the needs of your treatment center, and be consistent in their use so that you can at any time show objectively what has happened to the patient under your care.

A Public Health Agency Solves the Problem of Written Prescriptions

Thelma M. Holmes, B.A.

Obtaining specific written orders for physical therapy can be a major problem in public health agencies. Since the physician is seldom at hand for the convenience of an interview with the staff, an adequate prescription blank coupled with a definite procedure for its use is imperative to the effective care of the patients. Following the initiation of treatment, changes in orders, renewal of orders, and progress reports must also be easily negotiated.

After careful examination of methods used by other agencies, the Visiting Nurse Service of Rochester and Monroe County devised a prescription form which it has used for about four years. It has been found highly successful in the acquisition of initial written orders and in the transfer of information regarding progress and changes in orders.

It will be noted from the illustration (Fig. 1) that all the essentials are present—diagnosis, treatment, frequency of visits, precautions, and other pertinent information. An important adjunct to the blank and the part which has proved most valuable to the better care of the patient is "Remarks by Member of VNS Staff." It is most frequently used in the manner shown; however, the following examples also are typical of its use.

1. The patient's mother states that when you removed the cast, you asked that trunk exercises be resumed. May we have specific orders regarding these exercises?
2. The patient states that he may bear full weight and discard the crutches as soon as possible. Would you verify this? Also, may we begin heavy resistive exercises for the hip and knee?
3. We have been visiting every other day. The patient's wife now seems to have the exercise routine well in hand and performs it with him three times daily. May the visits be reduced to once weekly until he is allowed to get up?
4. This is to confirm our recent telephone conversation. The patient has been referred to the Rochester Rehabilitation Center for concentrated occupational therapy and physical therapy, specifically directed towards reemployment. The Rochester Rehabilitation Center will contact you for specific orders. We are, therefore, closing the case.

The most frequent source of referrals to a public health agency are the physician and the family. If the physician telephones the initial orders, the prescription is filled in and sent to him for verification, as shown in the illustration. When the family makes the initial contact, the physician must be called, the case discussed, and the orders recorded. Written orders are then sent to the physician for his verification. Frequent telephone contacts with the physician are strongly encouraged for they establish a personal rapport that no amount of writing can supplant. Discussions regarding problems or progress are educational both to the public health worker and the physician. The written follow-ups may serve to assert interest in the case and in many instances more clearly interpret the services being given or others available.

A self-addressed, stamped envelope is sent with each prescription to assure prompt return. Orders are usually returned within three or four days. Since this method of obtaining written orders has been used, the results have been gratifying. Prescriptions have been more specific and complete; but more important, the care given has been more efficient, and the rapport with the physicians has notably improved. It has proved its value as a prescription and as a tool to achieve the cooperation of the general staff, the physical therapy staff, and the referring physician.

Figure 1. →

Supervisor of Physical Therapy, Visiting Nurse Service Rochester and Monroe County, Rochester, New York.

VISITING NURSE SERVICE
500 East Avenue, Rochester 7, N. Y.
Hillside 5-3280

PHYSICIANS' ORDERS FOR PHYSICAL THERAPY

To:
Dr. William M. Blank, M.D.

Address One Street

Hosp. Unit No. _____

V.N.S. Area P.T.

Date 11/4/58

RE:
Patient's Name Doe, Mary (Mrs.) Address First Street

Age 65 Diagnosis Amputation Mid-thigh, right - Diabetic

General Physical Condition _____

VNS requests: Orders [x] Renewal of orders [ ]

Remarks by member of VNS staff This has been filled out according to our recent telephone conversation. If there are any changes, please fill them in, sign and return. It is a pleasure to be of service to you and your patient.

_____ Signed _____

MEDICAL ORDERS AND REMARKS:

I. Types of treatment and results desired 1. Stump bandaging with Ace bandages daily for shrinkage. 2. Strengthening and stretching exercises for right hip. 3. Balance and gait training with crutches. Instruct family to carry out routine three times daily.

II. Optimum frequency of treatment daily for one week, then three times weekly.

III. Precautions to be observed careful observation of left leg.

IV. Other treatment being given currently insulin - well regulated.

V. Date patient is to return to physician for check-up 4 weeks

Signed _____
Physician

Date _____

Electrical Stimulation for Reduction of Girth

Study of a Single Case

Robert Babbs, Jr., B.S., and Elizabeth Wood, M.S., with clinical assistance of Barbara J. Phillips, B.S., and Nan Dickson, Ph.B.

Interest for making this study was aroused by consideration of certain claims made in popular periodicals for the use of electrical stimulation of muscle as a means of "reducing," as well as by a study of literature published by certain manufacturers of electrical stimulating equipment.

A review of the scientific literature gives scant information about this method for girth reduction.

Turrell [1] refers to the paper of Prof. Jean Bergonié: "L'exercise, electriquement provoque" published in the *Archives d'Electricité Medicale*, Nov. 10, 1913. Turrell describes in some detail the procedures followed and the results which were claimed.

A large part of the body was covered with electrodes, each set of which had its own rheostat (intensity) control. The Bergonié electrode chair was used so that the patient could be in a semi-inclined position. Heavy sandbags were used to hold some of the electrodes in place and to offer resistance. The total electrode surface was estimated at 10,000 cm.^{2} (1580 in.^{2}). Total doses of current were from 25-30 ma. (milliamperes) for the "muscular" patient, up to 70-80 ma. for the "really fat or edematous" patient. Current densities (ma/unit^2) were low—as little as 0.01 ma./cm.^{2}—to insure the patient's comfort. The first treatment periods were of 20 minutes duration and the time was gradually increased to an hour and a half. Bergonié advocated in some instances treatments twice a day. Usually treatments were given 5 times a week for a course of at least 20 treatments.

Turrell states: "Sometimes an astonishingly rapid decrease in weight is obtained, but personally I am content with a reduction averaging a pound a treatment, and this amount I usually succeed in attaining." According to Bergonié and Turrell, the first objective sign to be noted is a reduction in girth.

Snow,[2] Clayton,[3] and Kovacs,[4] in their books on physical therapy and electrotherapy, mention Bergonié's work or Turrell's report of it, but the statements referring to these claims are vague or generalized, although Kovacs does say that "there is no doubt that weight reduction by electrical means, as described, is possible to a certain extent." Krusen,[5] Bierman and Licht,[6] and Osborne and Holmquest [7] in their texts on physical medicine and electrotherapy make no mention of the use of electrical stimulation for the treatment of obesity.

So far as the authors have been able to determine, no published experimental work on this problem supports the claims made by Bergonié.

Consumer Reports for February, 1958,[8] in an article on "Your Weight: Diets, Drugs and Devices" by Harold Aaron, M.D., presents this summary:

> After all the claims of all the new reducing gadgets are examined, the hard truth remains: there is no painless road to effective, long term weight reduction. No dietary aid, no drug, no passive exercise device can substitute for a supervised program of diet, moderate exercise, and psychological support.

Procedure

A female subject, middle aged (49), with moderate fatty deposition in both hips and thighs was chosen. The right hip and thigh were treated, 3 times during the first week, and 5 times per week for the next 4 weeks, making a total of 23 treatments for the series. The left hip and thigh were untreated to serve as controls for comparison. The subject pursued her normal daily activities and followed her usual diet throughout the test period. Body weight of the subject, as observed over the past 5 years, normally fluctuates between 137-141 pounds, and weight within this range has been constant.

Stimulating electrodes of equal size (4 inches by 6 inches: 10.16 cm. by 15.24 cm.) were used. Skin surface in contact with electrodes during stimulation measured 48 in.^{2} (310.08 cm.^{2}). Current dosage was increased to subject's tolerance (sometimes exceeding comfort) and vigorous muscular contractions were obtained. The General Electric Variable Frequency Wave Generator was used as a source of 50 c/s sinusoidal A.C. (an efficient current to obtain good contraction of normally innervated skeletal muscle [9]) which was surged (modulated) 21 times per minute producing a series of rhythmic graduated muscle contractions. Total current dosage was started at 25 ma. and raised to 35 ma. within the first 5 minutes of each 20 minute stimulation period. Each treatment in-

Robert Babbs, Jr., Staff Physical Therapist, Provident Hospital, Chicago; Elizabeth C. Wood, Assistant Professor of Physical Medicine, Northwestern University Medical School, Chicago; Barbara J. Phillips, Staff Physical Therapist, M-harry Medical School Physical Therapy Department, Nashville; Nan Dickson, Associate in Physical Medicine, Northwestern University Medical School, Chicago. Miss Phillips and Mr. Babbs were physical therapy students at Northwestern University Medical School at the time the experimental work was being done (July-August 1957).

TABLE I

Dates of measurements	1. Anterior inferior iliac spine to tip of coccyx		2. Circumference of thigh 6 inches below anterior superior iliac spine		3. Circumference of thigh 5 inches above proximal border of patella	
	Left	Right	Left	Right	Left	Right
July 1, beginning of treatment	15"	14⅞"	25½"	25¼"	20"	20½"
July 3, after 3 treatments	15¼"	15¼"	26⅛"	26"	20¼"	20½"
July 15, after 8 treatments	14⅞"	15"	25½"	25¼"	20⅛"	20½"
July 19, after 12 treatments	15¼"	15½"	25½"	26⅛"	20⅝"	21⅜"
July 26, after 17 treatments	15½"	15¾"	25¼"	25⅜"	19¾"	20¼"
August 2, after 23 treatments	16"	16"	24"	24¼"	20"	20"

cluded 20 minutes of stimulation to the hip and 20 minutes stimulation to the thigh. (Total—40 minutes of treatment.) Current density averaged 1 ma./in.^{2} (0.16 ma./cm.^{2}) for the first 5 minutes and 1.46 ma./in.^{2} (0.23 ma./cm.^{2}) for the total treatment.

Electrodes were applied to the right hip as follows:

One electrode over fat pad covering gluteus medius and upper gluteus maximus; second electrode over hamstring muscles just below gluteal fold. Hamstrings and muscles of the hip contracted strongly.

Electrodes were applied to the right thigh as follows:

Electrodes were placed opposing each other, equidistant, on the lateral and medial surfaces of the lower third of the thigh. Quadriceps, adductors and hamstrings contracted strongly.

Body weight, with assistance of sandbags, was used to insure good electrode contact when the hip was stimulated. Thigh electrodes were firmly held in place by use of an elastic bandage. Subject was in supine position for all treatments, with thighs and legs extended.

Measurements were taken before the treatment series was started, several times during the series, and at the completion (See table 1):

1. On both left and right sides, distance from anterior inferior iliac spine to tip of coccyx was measured with subject side-lying, tape crossing over fat pad of each hip.
2. On both left and right thighs circumference measurements were taken 6 inches below anterior superior iliac spine, with subject supine, thighs and legs extended.
3. On both left and right thighs circumference measurements were taken 5 inches above the proximal border of the patella, with subject supine, thighs and legs extended.

Two persons checked each measurement each time measurements were taken.

OBSERVATIONS

Although there were slight variations in measurements from one week to another there were no significant differences between untreated left side and treated right side. Any gains or losses were constant for both sides, or the treated side showed either greater increase or less decrease in size than the untreated side.

Body weight did not change significantly from the beginning (141 pounds) to the end of the series (138 pounds), the slight loss falling within the normal weight variation for the subject, as established over the past 5 years.

CONCLUSIONS

Forty minutes of muscle stimulation per day on the right thigh and hip muscles of this subject, with a selected current of sufficient intensity to produce 420 vigorous contractions of muscles each treatment for a series of 23 treatments over a 33 day period, were not effective in reducing girth of the treated areas.

COMMENTS

This is one case where the evidence is contrary to claims made for girth reduction by use of electrical stimulation. Further studies should be made to test a hypothesis that is being claimed as fact. If 50 or 100 studies similar to this were carried out, using the same procedures with the same or similar types of surged tetanizing currents, the data collected could be analyzed and more definite conclusions could be drawn as to the validity of the claims

made for girth reduction by use of electrical stimulation. The authors of this study will be interested in learning of any experimental work which has been done or is being done on this subject.

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The *Review* invites case reports from physical therapists who have followed an interesting course of treatment with or an unusual response to treatment by patients having one of the conditions listed below.

Rheumatism of the hand
Peripheral vascular disease
Guillain-Barré syndrome treated with ACTH and Cortisone
Reflex rigidity in a decerebrate child
Myotonia congenita
Congenital flatfoot
Spina bifida
Congenital amputation

NOTE: Suggestions for preparation of case reports were published in the October, 1957, issue of the *Review*, pages 666-667. Reprints of the suggestions may be requested by writing to the *Physical Therapy Review*.

Suggestions from the Field

An Adjustable Basketball Bankboard

John L. Stevens, M.A.

The bankboard is a simply constructed piece of equipment consisting of a 32 inch square of 3/8 inch plywood, a standard size basketball basket, and two 3½ inch opened eye bolts. It can be attached to any standard stall bars—thus permitting a range of 18 to 78 inches in height. As it weighs only 16½ pounds, it can be removed easily and stored under a plinth.

Orthopedically handicapped children are motivated as early as 5 years of age by their siblings and other children to be interested in shooting baskets. By adjusting the basket to a height that challenges their skill and at the same time provides them with a feeling of participation or success, they will spend at least a few minutes at this activity.

Chairs and standing tables can be used near the bankboard to enable those requiring support to participate. This activity is especially good for encouraging assistive hand function, arm extension, and shoulder flexion. Good habits of concentration and sustained participation are established by providing physical recreation of this nature.

Physical Therapist, Cerebral Palsy Center Bergen County, Inc., Ridgewood, New Jersey.

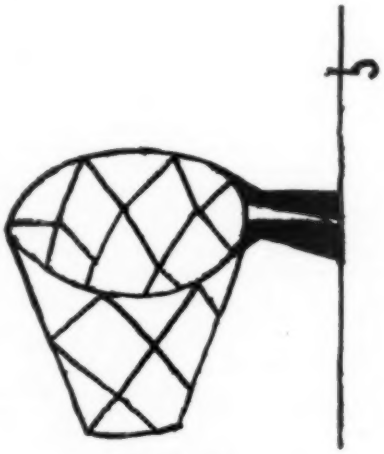


Figure 1.

Adjustable Shoulder Wheel

Sister M. Rosamond, O.S.F.

The adjustable shoulder wheel can be easily made by turning one of the V-brackets of a Zimmer Universal Overhead Frame toward the outer side of the frame (Fig. 1). About 12 inches of the long 44 inch bar is slipped through the swivel clamp attached to the V-bracket. A handle is conveniently placed on the opposite end of the bar, which makes it possible to rotate the adjustable shoulder wheel.

Bars of various lengths and weights may be added through the swivel clamps thereby making it possible for resistive exercises to be performed by the patient. Weights may be held in place by the Elgin collars.

Since the V-bracket is easily adjusted to various heights, a child or adult patient may either sit or stand while using the device.

We find that in hospitals where space is limited, this adjustable shoulder wheel is both convenient and easily managed.

Nurse-Physical Therapist, St. Mary's Hospital, Streator, Illinois.

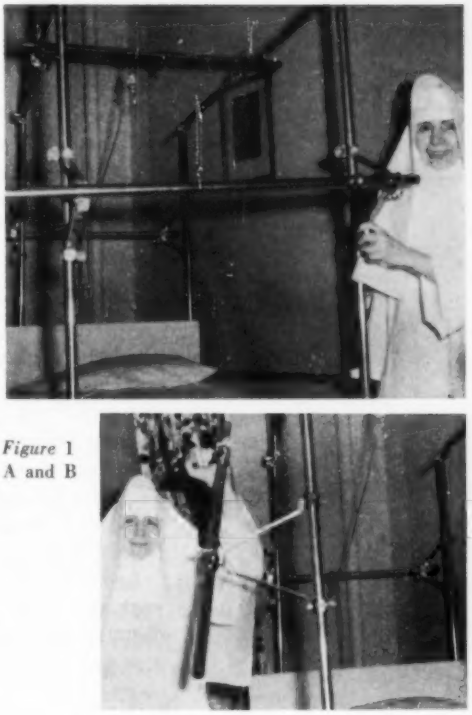


Figure 1
A and B

Proprioceptive Neuromuscular Facilitation Film

A 35 minute color film with sound is available to chapters and schools of physical therapy at a rental fee of $10.00. One copy of the film has been given to the Association by the California Rehabilitation Center. Requests from states east of the Mississippi should be directed to the American Physical Therapy Association, 1790 Broadway, New York 19, New York; rental is payable to the American Physical Therapy Association. Those west of the Mississippi should write to California Rehabilitation Center, 2600 Alameda, Vallejo, California; rental is payable to the California Rehabilitation Center. All requests should be submitted two weeks in advance of date of showing. Alternate dates are desirable since both copies may have prior bookings.

Editorial

Early Impressions

To serve as the Executive Director of your Association is a double privilege. First, there is the satisfaction of performing one's duties on behalf of a profession, allied with medicine, that plays a specific and skilled role in the rehabilitation of the patient. I think all the business women serving on the staff agree that we are glad not to be in a "nut and bolt" type of operation but are serving in an area where we, indirectly, contribute to the lessening of human pain and suffering, to the alleviation of some of the potentially disabling conditions that befall humanity.

And secondly, there is the really very great and rare privilege of working in a truly democratic organization—one which typifies that distinctly American talent for volunteering to "do it yourself," rather than waiting for something to be thrust upon you under orders from above. Our visitors from other lands often express surprise and frequently cannot even understand that we are not government-sanctioned in some way, either chartered or under royal or governmental patronage or direction. They wonder how we have "authority," not really comprehending the authority that rests in the will of the people.

Our foreign visitors who attend chapter meetings are often impressed with the wide representation of members from all parts of the country serving on chapter and national committees or holding a national office. Frequently they comment upon the manner in which issues are debated at all levels of the organization and decisions are reached through the democratic process. This is one of the really fine experiences we can offer them during their visits.

I congratulate the founders of the American Physical Therapy Association and their successors for structuring the democratic process so deeply in all our operations. The authority of the House of Delegates, as expressed in its elected directors and officers, is the broad base of that structure. I commend the wisdom of electing officers from a double slate—not merely moving officers up from chair to chair year after year until finally, by some sort of automatic succession, somebody becomes President. Our Bylaws and election procedures are, in my opinion, representative of the finest democratic processes, not merely in their wording but in their actual operation.

Editorial

The devotion of these officers and directors—the time they willingly give to Association business in travel, sometimes uncomfortable and inconvenient, and in the priority they give to communications and their sincerity in responding fully and frankly—is to me, quite uncommon. These are working officers, not merely names on a letterhead, who appreciate the moral responsibilities their offices entail and who faithfully serve their profession and their electorate.

I am more than glad, too, that membership in the APTA is not based upon some sort of professional pressure, either overt or subtle, but upon defined professional qualifications and the personal desire of every member to indentify himself with the Association.

Democracy, however, is based not alone on votes and offices but also upon the sources of financial support. And here again, I congratulate the wisdom of our predecessors in founding the APTA membership dues as the basic support of our activities and in wisely setting aside a reserve fund which can cover contingencies over short periods of time and which gives your officers and directors a measure of freedom in carrying out basic policies.

It is true that most professional organizations nowadays seek and welcome support from funds and foundations whose purposes and goals coincide, in some aspect, with their own. It is only fitting that we should accept gratefully this type of support, especially for noteworthy projects and programs above and beyond our own financial means. But our basic program, service to and on behalf of our members, needs the support of our members in order that they may have full control of Association policies. Recently the Executive Committee charged the Finance Committee to make a study of the dues structure of the Association and our Treasurer will editorialize more fully in a later issue.

When I spoke of two major satisfactions, I was, of course, mistaken. In any business situation there is the pleasure of working with people who are capable and devoted to their duties. I would be quite unthinking if I should overlook the deep satisfaction of working with our professional and business staff. Your very distinguished professional staff serves as a balance wheel, as a stabilizing force, from one administration to another. It is the official "memory" of the APTA, serving each Board and each President to the best of its ability, carrying out old and new policies with equal efficiency. For while staff does not make policy, it certainly influences the day-to-day administration of policy and is a safeguard against any possible vaccillation or inconsistency. Here again, the Association is wise in keeping a devoted staff and not allowing changes in elective officers and directors to instigate a kind of "spoils system" (such as I have seen in some membership organizations) where each new group of officers wreaks havoc with the staff in putting in its particular favorites. Your business staff serves with capability and efficiency—I am more than impressed with the good management policies I have been

fortunate enough to have inherited from my predecessors.

You might think, from the above—that the job were all finished!—that there were nothing for the new executive to do but to carry on in best tradition. I don't, however, believe that to be true. Each day brings new opportunities. I only hope that some day (and I hope that will be many days ahead) we can all look back together over the years and note the further growth and progress of the Association.

ANNETTA CORNELL WOOD
Executive Director

Report of Nominating Committee

On Dec. 11, 12, and 13, 1958, the Nominating Committee met at the National Office to select a slate of candidates for the National election in June, 1959. Three directors and two members of the Nominating Committee are to be elected to serve 3 year terms.

Seventy-seven members were suggested by 22 chapters and 2 individual members for consideration by the Committee. Six of those who were suggested declined to serve and 8 failed to reply to the request for consent to serve. Serious consideration was given to the present and continuing composition of the Board in an effort to insure balanced representation of all areas and professional interests. The slate represents 10 chapters with widespread geographical distribution.

We are pleased to present the following slate of candidates for directors and members of the Nominating Committee.

CANDIDATES

Directors: Three to be elected for three years

Arthur Brown	Newark, New Jersey
Dorothy Fredrickson	Nashville, Tennessee
Esther Gillette	Fort Collins, Colorado
Florence Linduff	Washington, D.C.
Mary E. Rexroad	Oklahoma City, Oklahoma
Helen Stewart	Cleveland, Ohio

Nominating Committee: Two to be elected for three years

Dorothy Baethke	Philadelphia, Pennsylvania
Katherine Carlisle	Winchester, Massachusetts
Ruby Decker	Galveston, Texas
Mildred Wood	Chapel Hill, North Carolina

In addition to preparation of the slate the Committee devoted one day to the development of procedures for the guidance and use of future Nominating Committees. The Committee also prepared suggestions and recommendations to the Board of Directors and the National Office staff.

Nominating Committee

GLADDES NEFF
BETH PHILLIPS
DOROTHY P. WAGNER
VIRGINIA WILSON
MARY CLYDE SINGLETON, *Chairman*

The Return Named in Top Ten

Previously acclaimed by Dr. Howard Rusk and Howard Thompson, the *New York Times* critic of nontheatrical films, our Association's new film, *The Return*, has been named third in the top 10 nontheatrical films of 1958.

Quoting from Mr. Thompson's column in the Sunday *Times* of January 4, 1959, "The ever-widening horizon of the nontheatrical motion picture field can perhaps be best gauged by its best products, and the outstanding 16mm. entries of the closing year speak for themselves in variety of content and professional treatment. If 1958 was not especially crowded with distinguished 16mm. fare, the exceptions still made a notable contribution. A few even matched some of the best nontheatrical films ever made.

"The following miniatures (excluding one-hour length pictures) are submitted as the most rewardingly creative offered to American viewers (usually for rental and/or purchase) since January. All were either originally released in 16mm. or simultaneously through other channels. Space limits credit to each participant." Briefs of the 10 outstanding films followed Mr. Thompson's introductory remarks.

Release of *The Return* was announced in the November 1958 issue of the *Review*, pages 771-772. A listing of film libraries where prints are on deposit appeared in the December *Review*, pages 833-835; and a final, corrected listing follows on the opposite page.

Film Libraries Where *The Return* is available

In no case is there a rental charge. Some libraries charge a service fee to cover handling, storage, record keeping, reports, regular inspections, minor repairs, publicity, and listing in the library's catalogue.

We have asked libraries for corrections of their listings, and have made changes as indicated. Since we did not have a complete response, it is possible that some libraries listed as having no fee may charge a fee, or may charge shipping and insurance costs. In the event that you pay insurance charges, please insure the film for $200.00

Most libraries restrict their service to their own state; however, several list neighboring states as eligible for service, and a few service the entire United States. So read through the entire list to find alternative resources. In an emergency, the National Office will, as in the past, arrange to send the film to you.

Status of the film is indicated by the initials A—accepted, P—being previewed.

		Fees
ALABAMA		
James F. Cummings, Supervisor Audio-Visual Service University of Alabama, Ext. Div. University	A	$1.00
ALASKA		
Ruth D. Anderson Health Education Technician Alaska Department of Health Alaska Office Building Juneau	A	no fee
ARIZONA		
Venice M. Lindsay, Manager Visual Aids Bureau University of Arizona Tucson 25 (Serves Arizona, New Mexico and Nevada)	A	$.75
ARKANSAS		
E. J. Easley, M.D. Acting Director Arkansas State Board of Health Little Rock	A	no fee return shipping
CALIFORNIA		
Film Library Bureau of Health Education State Dept. of Public Health 2151 Berkeley Way Berkeley 4	A	return shipping
J. E. Lateana Film Library Supervisor University of California, Ext. Div. Berkeley 4 (serves 8 western states)	A	$1.50 (Cat. #2577)
Herbert E. Farmer Director of Services Dept. of Cinema University of Southern California University Park Los Angeles 7	A	$2.50

		Fees
COLORADO		
Robert de Kieffer, Director Bureau of Audio-Visual Instruction University of Colorado, Ext. Div. Boulder	A	$1.00
CONNECTICUT		
Carlton W. H. Erickson Director, Audio-Visual Center University of Connecticut Storrs	A	$1.00
DELAWARE		
Howard E. Row Asst. State Supt. Secondary Education State Dept. of Public Instruction Dover	A	no fee
DISTRICT OF COLUMBIA		
Sociology Division District of Columbia Public Library 8th and K Streets Washington 1, D.C. Att: Mr. Quinam	P	
FLORIDA		
Audio-Visual Center Florida State University Tallahassee	A	$.50—$1.00
George L. Crutcher, Head Dept. of Visual Instruction Florida Cooperative Film Library University of Florida Gen. Ext. Div. Gainesville	A	$1.00 return shipping
GEORGIA		
Anne R. Crawford, Manager Film Library Georgia Center for Continuing Education University of Georgia Athens	A	$1.00 plus shipping both ways

		Fees
HAWAII		
Fortunato Teho Visual Aids Supervisor College of Agriculture University of Hawaii Honolulu	A	no fee
IDAHO		
Allan Perry, Supervisor Audio-Visual Center University of Idaho Moscow (Serves Idaho and neighboring states)	A	$1.00
ILLINOIS		
Howard E. Hough, Chief Bureau of Health Education State Dept. of Public Health 505 State Office Building Springfield	A	no fee
INDIANA		
Carolyn Guss Audio-Visual Center Indiana University, Ext. Div. Bloomington	A	$1.00
IOWA		
John R. Hedges Associate Director Bureau of Audio-Visual Instruction State University of Iowa, Ext. Div. Iowa City	A	$.60 plus shipping both ways
KANSAS		
Elizabeth Lawson Visual Aids Service Bureau of Visual Instruction University of Kansas, Ext. Div. Lawrence	A	$1.00
KENTUCKY		
Ruby Evans Hart, Director Department of Audio-Visual Services College of Adult and Ext. Educ. University of Kentucky Lexington	A	no fee
LOUISIANA		
Cleo Alexander, Assistant Louisiana Polytechnic Institute Regional Film Library Ruston	A	no fee shipping must be prepaid
MAINE		
Clarence Bergeson, Director Audio-Visual Service University of Maine Orono	A	$1.25
MARYLAND		
Marian Noppel, Film Librarian Extension Service Film Library University of Maryland College Park	P	
MASSACHUSETTS		
Anthony V. Caramello Director of Health Information Dept. of Public Health, State House Boston 33	A	no fee
MICHIGAN		
Daniel S. Lirones, Consultant University of Michigan Audio-Visual Education Center 720 East Huron Ann Arbor	A	$1.00
MINNESOTA		
Erwin C. Welke, Dept. Head Audio-Visual Extension Service University of Minnesota Ext. Div. 115-121 TSMa Minneapolis 14	A	$1.00
MISSISSIPPI		
W. D. R. Stovall, Supervisor Audio-Visual Education Division of Instruction Dept. of Educ. State of Mississippi Jackson	A	no fee
MISSOURI		
C. W. Ballew, Assistant Director Visual Education Department University of Missouri, Ext. Service 23 Jesse Hall Columbia	A	$1.00 includes shipping both ways
MONTANA		
Russell Steen, Supervisor Visual Education State Department of Public Instruction Helena	A	no fee shipping both ways
NEBRASKA		
Lester W. Harvey, Supervisor Bureau of Audio-Visual Instruction University of Nebraska Ext. Div. Lincoln 8	A	$1.00

		Fees
NEVADA		
Jerry Robinson Film Library, Agricultural Information Fleischmann College of Agriculture University of Nevada Reno	A	no fee
NEW HAMPSHIRE		
Edward W. Colby, M. D. State Health Officer Health Materials Unit 61 South Spring Street Concord	A	no fee
NEW JERSEY		
Sally M. Clark, Assistant Visual Aids, Department of Education State Museum, State House Annex Trenton	A	no fee
NEW MEXICO		
Milton O. Johnson, Director Health Education Division Department of Public Health P. O. Box 711 Santa Fe	A	no fee
NEW YORK		
Robert M. Crist Film Library Supervisor New York State Department of Health 84 Holland Avenue Albany (Service restricted to N.Y. State)	A	no fee
NORTH CAROLINA		
Roger G. Whitley, Supervisor Film Records and Equipment State Board of Health Raleigh	A	no fee
NORTH DAKOTA		
Bernardine Cervinski, Director Division of Health Education State Department of Health Bismarck	A	no fee
OHIO		
Helen Massengale, Chief Division of Health Education State Department of Health 306 Ohio Departments Building Columbus 15	A	no fee
OKLAHOMA		
Russell R. Myers Extension Specialist, Audio-Visual Education Educational Materials Services University of Oklahoma, Ext. Div. Norman	A	$.50
OREGON		
Jack N. Goodman Library Manager Dept. of Visual Instruction, Ext. Div. Oregon State System of Higher Education Corvallis	A	$1.25
PENNSYLVANIA		
Vivienne E. Cupps Assistant Director, Audio-Visual Center Chatham College Pittsburgh 32 (Serves Pennsylvania, Ohio, and West Virginia; occasionally other states)	A	$1.00
PUERTO RICO		
Jose Leavitt, Director Bureau of School Extension Department of Education Hato Rey	A	no fee
RHODE ISLAND		
F. P. Allen The Library University of Rhode Island Kingston	A	no fee; shipping cost, both ways, charged to borrower
SOUTH CAROLINA		
Tena Dowling, Film Librarian Film Library Public Health Education Section State Board of Health Columbia 1	A	no fee; return shipping
SOUTH DAKOTA		
W. P. Wentzy, Department Head Dept. of Audio-Visual Education & Photography South Dakota State College Brookings, College Station	A	$1.00
TENNESSEE		
John T. Benton Coordinator of Film Services University of Tennessee, Ext. Div. Box 8540, University Station Knoxville (Serves entire United States)	A	$1.00
Nashville Branch, Film Library University of Tennessee, Ext. Div. 810 Broadway Nashville (Serves entire United States)	A	$1.00

(*continued on page* 108)

CONFERENCE · 1959

Minneapolis • June 21-26 • Hotel Leamington

Land of Legend

Minnesota, the legendary home of Paul Bunyan, has had a long and varied history. Some noted authorities believe the first evidence of recorded history in North America was found in this state.

A farmer, near the town of Kensington, in 1890 unearthed a stone inscribed with strange characters. Years of study now show that this stone was inscribed with old Norse Runic letters and describes a camp on that site in the year 1362, long before the birth of Columbus. It is now believed this hardy party of Norsemen traveled down Hudson's Bay and somehow found their way to the land of Minnesota. If this is true, Minnesota was the first area of the United States ever seen by a European.

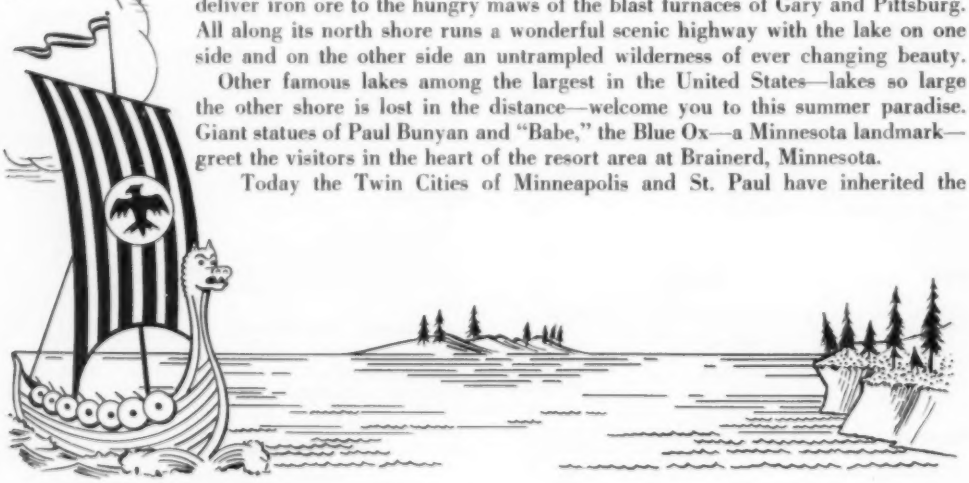
The next evidence of early European visitors to this area was in the accounts of the "Fur Trappers" and "Voyageurs." From their claims for their countries, this land was ruled by four flags, the French, the Spanish, the British, and finally, the United States. The four flags are shown on this page along with the viking ship of the Norsemen. In 1832, Henry Schoolcraft discovered the head waters of the mighty Mississippi River, 159 years after the discovery of the Father of Waters.

Long before the railroads had pushed the frontier westward, Minnesota was being supplied by the famous river steamboats; in fact, in 1858 St. Paul, the capital city, was visited by over 1,100 boats. The famous Red River ox carts fanned out to the north and west carrying goods and supplies to the new settlers.

Modern transportation has turned this area into a nation's vacationland; with its 11,000 lakes and good roads the entire state has become a summer playground. On the northeast, the great Lake Superior acts as a roadway to deliver iron ore to the hungry maws of the blast furnaces of Gary and Pittsburg. All along its north shore runs a wonderful scenic highway with the lake on one side and on the other side an untrampled wilderness of ever changing beauty.

Other famous lakes among the largest in the United States—lakes so large the other shore is lost in the distance—welcome you to this summer paradise. Giant statues of Paul Bunyan and "Babe," the Blue Ox—a Minnesota landmark—greet the visitors in the heart of the resort area at Brainerd, Minnesota.

Today the Twin Cities of Minneapolis and St. Paul have inherited the



pioneering spirit of their earliest settlers and are ever expanding. Business, Medicine, and Industry have pushed ahead with developments and discoveries until today there is a wonderland of adventure awaiting you.

Come to Minnesota! The fun, the experiences you will share and gain, will be as impressive and as lasting as Paul Bunyan's "tall tales!"

Pain and Paul Bunyan

If Paul Bunyan ever had a pain it must have been anguish, because it is doubtful that he had a physical therapist to help relieve his symptoms. If Paul had a pain and a physician who prescribed physical therapy, Paul's gratitude could hardly have been greater than the gratitude most patients express for the help we give them. But have you ever found yourself saying, "If he didn't have so much pain, we really could produce results." The patients you treat will be grateful if you seize the opportunity to fortify your knowledge of pain mechanisms and learn all that you can of methods for relieving pain. This opportunity, of course, will be awaiting you in Minneapolis, June 21-26.

The word, pain, is usually qualified when a physician records the patient's history and complaints. Dull, sharp, radiating, lancinating, jumping, boring, referred, shooting, wandering, girdling, phantom, or central are only a sample of the descriptive terms used. That the word, pain, usually is and must be qualified to accurately report the patient's complaints and symptoms is, in itself, an indication that there is much to be learned of this subject.

The authors and editors of Cecil and Loeb's *Textbook of Medicine*, Eighth Edition, found it necessary to index almost 200 items under "Pain." There are also cross indexed items such as "See also *Backache*," "See also *Headache*." "Fatigue" rates only 10 such items; "Edema" is followed with roughly 60 listings; "Paralysis" carries about 60 listings; while only 6 items appear under the heading, "Weakness;" and about 20 items are classified under "Sensory disturbances."

This hasty review is again just a sample but adds to the Program Committee's original thought that the subject of pain deserves further discustion. It appears that the problem of pain is recognized as a large one—almost as big as the legendary figure of Paul Bunyan. No problem was too big for Paul Bunyan and although individually we are not Paul's size, the concerted efforts of at least 10 physicians and more than 20 physical therapists should add up to a Bunyan-sized packet of helpful information. Your new knowledge and skills taken back to the patient whose problems confront you will hasten the patient's recovery and will inspire thoughts of gratitude which will not be legendary but will be justifiably real!

Courtesy of Minneapolis Chamber of Commerce

Minneapolis skyline as seen from the east bank of the Mississippi River

Association News

Marriages

Heather Alexander, of Berkeley, Calif., to E. Thomas Williams, Albany, Calif.

Julia A. Carothers, of Kansas City, Mo., now Mrs. Julia C. Payne, San Francisco, Calif.

Jean F. Cutler, of Denver, Colo., now Mrs. Jean C. Clauss, Elmhurst, Ill.

Ruth A. Huber, of Ann Arbor, Mich., to Charles J. Hammer, Jr., Ann Arbor.

Barbara Meine, of Omaha, Nebr., to Howard McCarthy, Wayne, Mich.

Margaret E. Monson, of St. Paul, Minn., now Mrs. Margaret M. Asenbrenner, St. Paul.

Betty A. Tasker, of Salt Lake City, Utah, now Mrs. Betty T. Empey, Provo, Utah.

California Chapters 1959 Convention

The San Diego Chapter is Host for the 1959 Convention of the California Chapters of the American Physical Therapy Association, to be held April 4 and 5 at the U.S. Grant Hotel in San Diego.

On Saturday, April 4, the General Meeting will be held, with a distinguished panel of speakers presenting an informative program concerning all phases of Geriatrics, and the Physical Therapist's Approach to the Patient.

Saturday evening, there will be a trip to Tijuana, Baja California, which will include a steak dinner and the Jai Alai Games.

Sunday morning, there will be a combined Brunch and Joint Executive Committee Meeting. The convention will be officially terminated about noon.

All California members are invited to attend the Saturday meeting and social event.

Chapter News

Northern California

A display of hobby products, and vocational products was a part of a recent program of the Chapter. Space for showing and for selling of such items as: books, place mats, driftwood, photographs, prize plants, paintings, and "what have you" was made available to members and the invited Occupational Therapy Association members.

Southern California

Members attending the November meeting at the Orthopedic Hospital heard a program on "Controlled Automobile Rear-End Collisions, and Investigation of Related Engineering and Medical Phenomena" by Charles O. Bechtol, M.D., Chief of Orthopedic Surgery, School of Medicine, University of California, Los Angeles.

District of Columbia

The newsletter attempts to keep the members informed of the changing membership by noting arrivals, position changes, and departure of members.

Kentucky

A showing of the films "Proprioceptive Neuromuscular Facilitation" and "The Return" became a portion of the program at the November 7 Chapter meeting.

Minnesota

The Chapter is searching for a better name for the newsletter, *Spark Gaps*.

The October issue lists the 1959 Chapter Conference Committee Chairmen who are busily planning for the 36th Annual Conference to be held in Minneapolis, June 21-26.

New York: Greater New York District

Mrs. Patricia Bauchle, Consultant, Department of Professional Education of the APTA, made her "debut" at the District meeting in October. Discussions for the meeting were on Public Relations and Publicity.

Pennsylvania: Western District

Items of interest on past, present and future meetings on District, Chapter, and National levels are reported. For the benefit of the members who maintain an up-to-date district directory, a list of address and membership changes is reprinted as received from the National Office.

Texas: Southeast District

Something new has been added—name tags—for quick identification and promotion of a better friendship among members at meetings.

Vermont

The Chapter was host to the Maine and New Hampshire Chapters at the new Rutland Hospital, October 25. The program, a panel topic of "Aspects of Internal Medicine of Importance to the Physical Therapist," was presented by three physicians from the University of Vermont. The film, "The Functional Anatomy of the Hand" and a discussion of "New Conception of the Hand" by an afternoon speaker concluded the one day program.

Wisconsin

Slides of "people you know" at the Seattle Salmon Barbecue were shown at the November Chapter meeting. Arrangements were also made for *two* showings in one day of *The Return*—one before the Business Meeting for the early arrivals, then a repeat showing after the dinner meeting.

Look magazine chose Ellen Herman, physical therapy senior at the University of Wisconsin, as a cover girl for the September 30 issue.

Original Papers for Conference

Members of the Association who have been working on special projects related to physical therapy procedures—research, clinical or laboratory; reviewing results achieved with a group of patients; adaptation or application of new methods of treatment; or any other subject which will advance the profession should plan now to report their work in Minneapolis next June.

Two copies of manuscript, typed (double-spaced), should be submitted to Dorothy E. Voss, Editor-in-Chief, *Physical Therapy Review*, by April 1, 1959. Authors must include their official titles or positions with the manuscript.

The *Review* Editorial Board will select papers to be read by members and has the prerogative of publishing those papers selected. Members will be notified of the Board's decision not later than April 25.

Alumni Association

Mayo Clinic

School of Physical Therapy

Plan to renew old acquaintances next June at the Conference in Minneapolis.

For details send your correct address *now* to:

Esther Swartz, Secretary and Treasurer
Section of Physical Medicine and Rehabilitation
Mayo Clinic, Rochester, Minnesota

New Student Members

Duke University

Treva M. Beam
Thomas D. Clapper
Barbara H. Day
Anita S. Espenshade
Robert A. Federchuck
Lu L. Galt
Ann B. Hightower
Elizabeth L. Potter
Rachel Speight
Elia E. Villanueva
Joyce I. Whitaker
Sue A. Whitney
Carol L. Williams

Mayo Clinic

Agnes L. Allen
Jack L. Avery
Howard B. Berkeland
Peggy A. Burgette
Rita G. Casey
Richard W. Devine, Jr.
Lucile M. Frickson
Tom R. Garrett
Shirley A. Hass
James J. Higgins
LaRae Kalisiak
Julie M. Kunerth
Lynn H. Larkin
Roberta M. Lensch
Sylvia L. Lofgren
Mervin A. Miller
Richard N. Milner
Marjorie G. Nicoll
Samuel W. Ruzic
Judith L. Schaub
Raymond W. Uhlhorn
D. Paul Vencill
Patricia Yarbrough

New York University

Nora A. Ramirez

Simmons College

Eleanor M. Clarke
Jane M. Drooker
Eleanor Friedman
Nancy K. Glynn
Joan P. Gobbi
Susan E. Hyde
Mary J. Mayes
Eleanor W. Repeta
Mary E. Smith

Stanford University

Robert L. Doctor
Diane B. Masline
Mary M. Meek
William H. Osborne

University of Connecticut

Virginia Chase
James J. McQuade
Robert F. Dollogono
Virginia Story

University of Pennsylvania

Nancy L. Stimpson

WORLD CONFEDERATION FOR PHYSICAL THERAPY *News*

Third Congress

World Confederation for Physical Therapy

Third International Congress—Sunday, Sept. 6, 1959, to Saturday, Sept. 12, 1959.

Place of the Congress—The Congress will be held at the Nouvelle Faculté de Medécine, 45 Rue des Saints Péres, Paris VI^e^, France.

Attendance—The Congress is open to all members of the American Physical Therapy Association.

Opening Ceremony—The opening Ceremony will be held in the famous Palais de Chaillot at 9 A.M. Monday, Sept. 7, 1959.

Theme—The theme of the Congress will be "Physical Therapy—Its Importance in Human Economic and Social Development" with emphasis on Neurology, Geriatrics, Orthopedic Surgery and Traumatology, Rheumatology, Heart and Chest Conditions, Aids and Prostheses, and Psychiatry.

Further information will be published as the program develops.

OFFICIAL LANGUAGE

There will be simultaneous translation of the lectures and discussions in English, French, and German.

General Assembly—A meeting of the General Assembly of the World Confederation for Physical Therapy will be held during the Congress.

Social Events—The following social program is being planned for members of the Congress:

A reception at the Musée du Louvre
A trip on the Seine
An evening at the Opéra de Paris
A reception for foreign representatives at the Hotel de Ville de Paris
An official banquet
A visit to the Chateau de Versailles to see Son et Lumière
A visit to the Chateau de Pierrefonds

For all Association members and other persons planning to attend the Congress from the United States the following arrangements have been made by the American Physical Therapy Association:

Charter Plane—Arrangements have been made with Trans World Airlines and KLM Royal Dutch Airlines to provide round-trip reservations on charter flights as follows:

Depart New York Aug. 15, 1959—Arrive London
Depart Paris to New York Sept. 14, 1959
Round-trip fare: $257.00
Depart New York Sept. 3, 1959—Arrive Paris
Depart London to New York Oct. 1, 1959
Round-trip fare: $250.00

The above fares are based on full capacity of chartered aircraft and are subject to revision.

Reservations must be accompanied by a $75.00 deposit and should be sent as soon as possible to:

American Physical Therapy Association
1790 Broadway, New York 19, New York

In the event of cancellation, full refund will be made up to 60 days before departure dates. After that time, flight refunds depend upon substitute passenger being secured.

Land Tours—American Express Company has arranged two tours for the three weeks prior to the Congress and three weeks after the Congress week. The above charter plane schedules coincide with tour dates. Further information on the European tours may be obtained by writing to:

Mr. P. W. Gould
American Express Company
65 Broadway
New York 6, New York

or by consulting any local office of the American Express Company.

Accommodations and Congress Fees—An allotment of hotel rooms is being held in Paris for members attending the Congress from the United States. Accommodation deposits, Congress registration, and social events fees will be collected by the American Express Company. Detailed information will be available at a later date.

Courtesy of the French Travel Bureau

Notre Dame et le Quai

Pre- and Post-Congress Courses

Great Britain

The following courses have been arranged by the Chartered Society of Physiotherapy, Tavistock House (South), Tavistock Square, London W. C. 1, England:

A. Name of Course
Paraplegia

Location of Course
Stoke Mandeville Hospital, Aylesbury, Bucks

Dates of Course
Aug. 31 through Sept. 3, 1959

B. Name of Course
Medical and Surgical Chest Conditions

Location of Course
Brompton Hospital, London, S.W.3.

Dates of Course
Sept. 14 and 15, 1959

Applications
Applications should be directed to the Chartered Society of Physiotherapy at the above address.

Denmark

Name of Course
Disorders of the Spine with Special Reference to Posture and Neurology

Location of Course
Idraetshøjskolen, Sønderborg (Folk High School of Physical Training)

Dates of Course
Aug. 23 through Aug. 28, 1959

Fee
228 Danish Kroner which includes board and accommodations at the school

Applications
Applications are limited to those physical therapists who *understand Danish* and should be directed no later than May 1, 1959 to:

Danske Fysioterapeuter
Vesterbrogade 8
Vesterport 453
Copenhagen V, Denmark

Sweden

The Kvinnliga Legitimerade Sjukgymnasters Riksforbund will give assistance to any physical therapist attending the Paris Congress who would like to study in Sweden at any time before or after the Congress.

Western Germany

The following courses are being arranged by the Zentralverband Krankengymnastik E.V. and are open only to those physical therapists who *understand German*. Applications should be sent to the individual school offering the course.

1. Name of Course
   Posture and Corrective Exercises with Special Consideration for the Physically Handicapped (Relaxation and Breathing Exercises)

   Location of Course
   Krankengymnastikschule an de Universität Göttingen

   Dates of Course
   Sept. 16 through Sept. 26, 1959

   Fees
   Members of Organizations belonging to the World Confederation for Physical Therapy 60 Marks
   Nonmembers 75 Marks
2. Name of Course
   Treatment of Scoliosis According to Klapp (Klapp's Crawling Exercises)

   Location of Course
   Krankengymnastikschule an der Chirurgischen Universitatsklinik "Rudolf Klapp-Schule," Marburg-Lahn

   Dates of Course
   Sept. 28 through Sept. 30, 1959

   Fee
   Members of Organizations belonging to the World Confederation for Physical Therapy 20 Marks
   Nonmembers 30 Marks
3. Name of Course
   Connective Tissue Massage

   Location of Course
   Krankengymnastikschule an der Universität Freiburg/Br.

   Dates of Course
   Aug. 17 through Sept. 3, 1959

   Fee
   Members of Organizations belonging to the World Confederation for Physical Therapy 120 Marks
   Nonmembers 150 Marks

(*continued from page* 101)

TEXAS

Office of Visual Instruction Bureau — A — $1.00
University of Texas, Ext. Div.
Austin 12
(Serves Texas, Arkansas, Louisiana, Oklahoma, New Mexico and Arizona)

UTAH

W. D. Brumbaugh, Director — A — no fee
Audio-Visual Bureau
University of Utah, Ext. Div.
Salt Lake City
(Serves N. W. New Mexico, N. Arizona, Montana, California, Utah, Nevada, S. Idaho, W. Wyoming, and W. Colorado)

VERMONT

Paula Dame, Film Librarian — A — $1.10
Audio-Visual Services Department
University of Vermont
Burlington

VIRGINIA

J. Robert Anderson, Director — A — no fee
Bureau of Health Education
State Department of Health
Richmond 19

WASHINGTON

Fred de Armond, Head — A — no fee; return shipping
Health Education Section
State Dept. of Health
Seattle 4

Film Center — A — $1.00
University of Washington, Ext. Serv.
Seattle 5
(Serves Pacific North West)

WEST VIRGINIA

Mildred P. Brain — A — $.15 plus shipping both ways
Chief Librarian
Audio-Visual Department
West Virginia University
Morgantown

WISCONSIN

F. A. White, Director — A — $1.00 plus shipping both ways
Bureau of Audio-Visual Instruction
University of Wisconsin
1312 West Johnson Street
Madison 6

WYOMING

John D. Alford, Head — A — $.50
Audio-Visual Department
University of Wyoming
Laramie

Education

Advisory Committee to the Department of Professional Education

October 20-23, 1958—National Office

COMMITTEE

Charlotte W. Anderson, *Chairman*
Dorothy Hoag
Margaret Kohli
Thelma Pederson
Beth Phillips

NATIONAL OFFICE STAFF

Sarah S. Rogers
Helen Klein
Patricia Bauchle
Annetta C. Wood, *Executive Director*
Lucy Blair, *Associate Executive Director*

CONSULTANTS

John Hinman, M.D., *Assistant Secretary*
Council on Medical Education and Hospitals
American Medical Association

Charles Russell, *Associate Director*
Institute of Higher Education
Teachers College, Columbia University

Catherine Worthingham, Ph.D., *Director*
Department of Professional Education
The National Foundation

Mary Callahan, *School Director*
Columbia University

The new members, Dorothy Hoag and Thelma Pederson (interim appointments filling the unexpired terms of Agnes Snyder and Dorothy Billenstein), were welcomed and recorders were selected for each day. The agenda was then approved in general. The first two days of the meeting were devoted primarily to discussion in two areas: first, relationships of the American Physical Therapy Association, Council on Medical Education and Hospitals, and the Council's Advisory Committee on Physical Therapy Education; and second, professional education.

Dr. John Hinman spent several hours with the group during which time he told of the organization of the Council's Advisory Committee on Physical Therapy Education. It was organized after the dissolution of the Council on Physical Medicine and Rehabilitation and is composed of nine physicians and three physical therapists, one of the latter representing the Board of the American Registry of Physical Therapists. The purposes of the committee are to assist the Council in evaluations of schools and in future revisions of the Essentials. The committee provides physician advice and closer liaison among the groups represented. The three physical therapists function as individuals, are responsible for transmitting the thinking of the Committee and policy decisions to the organizations which they represent, and speak for their organizations. Plans for teams of physicians and physical therapists to survey curricula in physical therapy are being discussed by the Committee and will be referred to the Council for consideration.

The purposes and work of an A.M.A. Joint Committee to study paramedical areas in their relation to medicine were described. The study of this committee has been outlined in three phases. The first phase has been accomplished through a conference of physicians, from approximately 27 medical organizations, designed to stimulate physician interest in paramedical areas. The second phase of the study will be of persons holding the Ph.D. degree who are nonmedical personnel. The third phase will include conferences of persons from professions allied to medicine. The committee is a fact-finding one and hopes to come up with a statement of relationships. It is not concerned with registration or licensure.

Mr. Charles Russell talked on "Common Characteristics and Trends in the Preparation for Several Professional Fields." The Institute of Higher Education, directed by Dr. Earl McGrath, has been studying liberal education in 11 professional areas, and it is anticipated that a report of its works and findings will be published in the late fall of 1959. It was interesting, and perhaps significant, that many of the problems facing us in education for physical therapy are also of concern to other professions. Common questions are: As programs are enriched and broadened, should the educational period be extended? What is the thinking on including elective hours in a curriculum? Are the hours

allotted to professional courses adequate, or too great? Should clinical practice be concurrent with or subsequent to didactic work? Mr. Russell reported that in the fields that the Institute is studying there is not a trend towards placing professional education at the postbaccalaureate level, nor is there necessarily a conflict in objectives of professional education with those of the university.

On the afternoon of the third day, Catherine Worthingham, Ph.D., talked on objectives and work of the Department of Professional Education as seen through the progress reports submitted to the National Foundation. In addition, she described the new scholarship program of the National Foundation. This program will supplement the one which has been in effect for several years, and will provide scholarships for four years of college education to students in five fields—medicine, nursing, occupational therapy, physical therapy, and medical social work.

The remaining time was spent on planning, summarizing the work of the meeting, and outlining recommendations to be submitted to the Board of Directors. The recommendations are (1) to ask the Board for clarification of objectives of the Committee, and (2) to notify the Board of the Committee's interest in better communication among various groups in the Association.

1959—APTA-OVR INSTITUTE

The Institute Committee, Dorothy Fredrickson, Margery Wagner, and Gladys Wadsworth, met on October 16 and 17 in East Lansing to discuss plans for the forthcoming Institute to be held April 13-17, 1959, at the Kellog Center, Michigan State University. The Committee outlined the purposes: inasmuch as educational programs affect the types and quality of physical therapy administered to patients, continuing efforts are made to offer additional opportunities to those responsible for the education of physical therapy students for study and discussion so that their knowledges and skills may be enhanced; set objectives—(1) to provide current concepts in the area of administration in order to stimulate improvement in the skills of supervision, human relations and communication; (2) to explore concepts and methods of evaluation as a means for improving standards of physical therapy service, i.e., patient care and student education; (3) to develop an appreciation and understanding of the trends in higher education—their implications for physical therapy education; (4) to stimulate and encourage long range thinking and planning in both the preclinical and clinical phases of physical therapy education, and develop a tentative program for each day's sessions.

Eligibility requirements were established as follows: a) Every applicant for admission to the Institute must be a member of the American Physical Therapy Association, and must be serving as an instructor or clinical supervisor at a school of physical therapy approved by the Council on Medical Education and Hospitals. b) Applications from persons intending to serve, or who have previously served, as instructors or clinical supervisors will be considered by the Institute Committee according to the number of available places within enrollment limits. Such participants must be prepared to pay their own expenses. c) Each AMA approved school is entitled to one travelship for an instructor serving on the school faculty and one clinical supervisor of an affiliating clinical center. Travelships are for first class round-trip transportation cost by plane, bus or train to East Lansing, Michigan. Travel by auto will be reimbursed at the rate of $.07 per mile up to the expense by plane or train. Accepted applicants planning to travel by plane will be requested to use *air tourist* or *air coach* wherever possible.

The next Committee meeting will be held January 15 and 16.

The University offers one approach to higher education. It presents opportunities, teaches essential techniques, opens windows to the man or woman who will look out. But education itself is the product of each man's total experience and continuing effort. It should begin at home. It should not be interrupted by graduation, and certainly it need not stop at retirement.

WILDER PENFIELD, M.D.
Journal of Medical Education
December 1958, Vol. 33, No. 12

SHORT TERM COURSES FOR GRADUATE PHYSICAL THERAPISTS

Title of Course	*Sponsor of Course*	*For Details Contact*	*Dates of Course*
Cerebral Palsy	The North Carolina Cerebral Palsy Hospital Durham, North Carolina	Dr. Lenox D. Baker Medical Director No. Carolina C. P. Hosp. Durham, North Carolina	Courses offered every 3 months—dates arranged according to individual need
Physical Therapy in the Care of Neuromuscular Disease	Georgia Warm Springs Foundation Warm Springs, Georgia	Robert L. Bennett, M.D. Medical Director Ga. Warm Springs Found. Warm Springs, Georgia	January April October
Postgraduate Course in Technics of Treatment	Children's Rehabilitation Institute for Cerebral Palsy Reisterstown, Maryland	Christopher H. Wiemer Executive Director Children's Rehab. Inst. Reisterstown, Maryland	Apr. 6—June 19, 1959 July 6—Sept. 18, 1959 Oct. 5—Dec. 18, 1959
Advanced Course in Physical Rehabilitation Methods	NYU-Bellevue Med. Cen. and NYU Sch. of Education	Mrs. Edith Lawton, Dir. Courses for Physical Therapists Institute of P. M. & R. 400 E. 34th Street New York City, N. Y.	Apr. 27—May 29, 1959
Technics of Neuromuscular Reeducation	California Rehabilitation Center Vallejo, California	Margaret Knott Chief P. T. Calif. Rehab. Center Vallejo, Calif.	January 1 April 1
Functional Bracing of the Upper Extremities	U. of California and U. S. Office of Vocational Rehabilitation	Prosthetics Education Program Rm. B4-229, Medical Center University of California at Los Angeles 24, California	Apr. 20—24, 1959
Above-Knee Prosthetics	Postgraduate Medical School & College of Engineering New York University	Prosthetics Ed. Program New York University Postgrad. Medical School 550 First Avenue New York 16, N. Y.	March 2—13, 1959
	U. of California and U. S. Office of Vocational Rehabilitation	Prosthetics Education Program Rm. B4-229, Medical Center University of California at Los Angeles 24, California	March 16—20, 1959
Upper Extremities Prosthetics	Postgraduate Medical School & College of Engineering New York University	Prosthetics Ed. Program New York University Postgrad. Medical School 550 First Avenue New York 16, N. Y.	May 18—29, 1959
	U. of California and U. S. Office of Vocational Rehabilitation	Prosthetics Education Program Rm. B4-229, Medical Center University of California at Los Angeles 24, California	June 1—5, 1959
The Physical Therapist's Role in the Treatment of the Geriatric Patient	U. of Pennsylvania and U. S. Office of Vocational Rehabilitation	Helen L. Bouman School of Allied Medical Professions University of Pennsylvania 3901 Pine Street Philadelphia 4, Pa.	March 9—13, 1959
Principles and Practice of Geriatric Rehabilitation	N.Y. Medical College-Met. Hosp. Center, U.S. O.V.R. and N.Y.S. Dept. of Health	Dr. Jerome S. Tobis Dept. of Phy. Med. and Rehab., N.Y. Medical College 1 East 105 St. N.Y. 29, N.Y.	April 6—17, 1959

Student Column

'Twas the Day after Christmas

'Twas the day after Christmas, and who should appear
At the P. T. Department, But Santa Claus dear
No longer so hale, not nearly so jolly—
In fact he looked pale, as if suffering from folly!
He hobbled along with one hand on his back
And one rubbing the shoulder that carried his pack.
He grimaced and groaned and said with a sigh
"Have you any help for a beat-up old guy?"
The student PT's, though surprised, I'll be bound,
Smoothly put him at ease as they gathered around:
"Why Santa, Dear Santa, you poor dear old thing!
Of course we can help you! Relief we can bring
To all of your aches, make you sing like a king."
"A massage the first thing," Paula Adams decreed:
" 'Twill relieve pain and spasm, and wipe out fatigue.
The staff's on vacation, our director's not here
But we will take care of you, never you fear."
Annette Cox brought a wheel chair, and soon in a jiffy
Had him prone on a plinth, in a drape that was spiffy.
"Some radiant heat to the part first," I cried,
And trundled the infrared lamp to his side.
Ed Horne then massaged him—his skill is not small—
Gave him effleurage, petrissage, friction and all.
While Jill Jones and Lou Jennings each took a limb
And kneaded and thumped with vigor and vim.
"I feel better already," Santa said when they'd done
"Don't go yet," we hollered, "we've only begun."
A posture analysis Jacquee Magee undertook with an aura of competency:
"I hate to inform you, but the famous belly
That shakes when you laugh like a bowlful of jelly
I grade a *poor minus!* You've too much for sure,
Relaxed is your abdominal musculature!
Lordosis, Kyphosis, C curve in your back
And one shoulder too high from carrying your pack!
You'll have to do sit-ups, and I shall prescribe
Pelvic tilt, hamstring 'stretching, head rolling beside."
"Fallen arches, grade 4," Jeanne McClelland observed,
"How far below Feiss' line your scaphoid has swerved!
Tibial torsion! And aches in your knees?
A few bakes in the baker we must manage to squeeze."
"I'll make out a program," announced Joanne Poe,
"Exercise therapeutic to correct all his woe.
You must do daily dozens. I'll show you how
Promise you'll do them faithfully now!"
"And good body mechanics," chimed Joe Wolfenberger.
"I'll teach you to lift that big sack to your shoulder
With minimum strain; to sit down in your sleigh
And crack your whip painlessly, driving away."
"Now here's what you do"—and we all started in
To demonstrate to him and raised such a din
That who should arrive in the door with a clatter
Than Miss Schmidt and Miss Pedersen!
What! Practicing medicine? Who would have thought
You'd forget all 'professional ethics' we've taught.
What doctor referred him? You worked on what orders?
But Santa said soothingly, "stay, gentle warders,
"You know the Seven Dwarfs? 'Twas Doc sent me here.
"And here's his prescription, to the point and quite clear:
"Give Physical Therapy. Do what you can
To make our worn master feel like a new man!
"Your students have done it. I'm rejuvenated!
"On the work of your pupils, be congratulated!
"I'm off, fit and frisky, to tackle again
Making happy at Christmas the world's children and men.
To all let me wish now a Happy New Year
And a right Merry Christmas, right filled with good cheer!"

DOROTHY E. CURTIS

(Reprinted from *Cherokee Chatter*—Publication of the University of Oklahoma.)

University of Pennsylvania

Physical therapy students of the University of Pennsylvania experienced two exciting changes at the beginning of this school year. Classes returned in September to new and expanded quarters, and in October the name of the school was changed from Auxiliary Medical Services to Allied Medical Professions.

The recently renovated building at 3901 Pine Street in Philadelphia now is able to bring together, for the first time, three divisions of the school. Students in physical therapy, occupational therapy, and medical technology can now all enjoy the fine library, the spacious auditorium, and the attractive student lounge facilities. In addition, each division is equipped with adequate classrooms, practice laboratories, research facilities, and office space.

On October 28 the first official open house was held in the new building. Tours of the facilities were arranged and demonstrations of

procedures being taught in classes were presented by the students.

The official dedication was held on November 25 with appropriate ceremonies followed by a dinner at which Basil O'Conner, President of the National Foundation, was the speaker. Representatives of national state, and local voluntary health agencies and professional organizations, friends of the University, and educational leaders of the University were present.

WAYNE KRESSLEY
Division of Physical Therapy,
School of Allied Medical Professions

EDITOR'S NOTE: Wayne Kressley is the son of Nevin R. Kressley, physical therapist at Pennsylvania Hospital, Philadelphia, who has been an active member of the Association since 1931.

University of Kansas Medical Center

The last two weeks before Thanksgiving vacation were full of extracurricular activities for the present class of physical therapy students at the University of Kansas Medical Center. Educational opportunities were afforded them that other students would have found especially interesting.

The Bellerive Hotel of Kansas City, Missouri, played host to an Institute for Physical Therapists during November 10-14. This Institute was conducted by the American Hospital Association with the assistance of the American Physical Therapy Association. Our class was fortunate enough to attend most of the meetings and came home a much wiser group of students.

Topics for the speeches included; Community Resources Available to the Physical Therapist, A Home Care Program, Medical Staff Relationship, Financial Aspects of Physical Therapy, Safe Practices in the Physical Therapy Department, and The Physical Therapy Records. This is by no means a conclusive list, but only a sample of some of the most interesting subjects we heard discussed. We were very much impressed with the excellent instructional staff provided for this Institute.

A week later we attended a postgraduate medical study of fractures held at our own University of Kansas Medical Center on November 17 and 18. This program was designed to cover thoroughly the problems presented in certain fractures, rather than to present a superficial discussion of a wide variety of injuries.

Guest faculty members consisted of C. F. Ferciot, M.D., Instructor of Orthopedics, Creighton University School of Medicine; Edward T. Haslam, M.D., Associate Professor of Orthopedic Surgery, Tulane University School of Medicine; Cline D. Hensley, Jr., M.D., Orthopedic Surgeon, Wichita Clinic; J. William Hillman, M.D., Professor of Orthopedic Surgery, Vanderbilt University School of Medicine; and Richard H. Kiene, M.D., Orthopedic Surgeon, Dickson-Diveley Clinic, Kansas City, Missouri.

The rest of the faculty was composed of the Orthopedic Staff of the University of Kansas Medical Center. Host for the two days was Leonard F. Pelteir, M.D., Head of the Section of Orthopedic Surgery here at the Medical Center.

It became obvious in this study that the physical therapist is often called in the post-operative care of fracture cases.

With Thanksgiving over, our thoughts are now directed toward the coming Yuletide season. Just before our coming vacation, the University of Kansas Medical Center is to have a tremendous Christmas party for the students, employees, and the teaching staff. By an "unlucky" turn of the cards, our Educational Administrator of Physical Therapy, Mrs. Ruth Monteith, landed on the entertainment committee. We are now engaged in searching through the students to find various hidden talents for singing, acting, and the playing of musical instruments. I offered my talents, but the students and Mrs. Monteith thought it best to leave my talents "hidden." "The show must go on" though and we are looking forward to a wonderful time.

JACK GOODMAN
University of Kansas Medical Center
Kansas City, Kansas

New York University

Among the advantages of being a New York University student of Physical Therapy is that you are in constant contact with persons of recognized achievement in the field of rehabilitation.

On Friday, October 17 the NYU students had the pleasure of meeting Mrs. Annetta C. Wood, the newly appointed Executive Director of the APTA, at a reception given in her honor by Dr. Howard A. Rusk. Mrs. Wood, a woman of attractive appearance with a personality to match, strikes us as being a dynamic person who will "win friends and influence people," for Physical Therapy.

Among the VIP's present was our own Miss

(continued on page 126)

Schools Offering Courses in Physical Therapy

APPROVED BY THE COUNCIL ON MEDICAL EDUCATION AND HOSPITALS
OF THE AMERICAN MEDICAL ASSOCIATION

Schools offering the four year program leading to a baccalaureate degree accept high school graduates and transfer students. Schools offering the 12 to 16 months' program leading to a certificate accept students who have completed all or most of their undergraduate work providing they meet certain course requirements. Recipients of a degree and/or certificate have equal professional status. For specific information regarding each school's entrance requirements, curriculum, tuition and other fees, write to the physical therapy director indicated below. All students should investigate course requirements *early*.

	Degree	*Certificate*
CALIFORNIA		
Mary J. Dodge School of Physical Therapy Childrens Hospital Society 4614 Sunset Boulevard Los Angeles 27	‡	†
Ronald A. Hershey School of Physical Therapy College of Medical Evangelists Loma Linda	†	†
Lucille Daniels Division of Physical Therapy Stanford University Stanford (Palo Alto)	†	†
Margery L. Wagner Curriculum in Physical Therapy University of California The Medical Center San Francisco 22	†	†
Charlotte W. Anderson Department of Physical Therapy University of Southern California Los Angeles 7	†	†
COLORADO		
Dorothy Hoag Curriculum in Physical Therapy University of Colorado Medical School Denver 20	†	†
CONNECTICUT		
James M. Bauer Acting Director School of Physical Therapy U 101 University of Connecticut Storrs	†	
ILLINOIS		
Elizabeth C. Wood Course in Physical Therapy Northwestern University Medical School 303 East Chicago Avenue Chicago 11	†	†
IOWA		
Olive C. Farr Physical Therapy State University of Iowa Hospitals Iowa City		†
KANSAS		
Ruth G. Monteith Section of Physical Therapy Education University of Kansas Medical Center Kansas City 12	†	†
LOUISIANA		
(Not accepting students during 1958-1959) Director School of Physical Therapy Charity Hospital of Louisiana New Orleans 12		†
MARYLAND		
Gladys E. Wadsworth, Ph.D. Department of Physical Therapy School of Medicine University of Maryland Baltimore 1	†	
MASSACHUSETTS		
Adelaide L. McGarrett Physical Therapy Department Boston University Sargent College University Road Boston 15	†	†
Constance K. Greene Department of Physical Therapy *Bouvé-Boston School, Tufts University Medford 55	†	
Shirley M. Cogland *Program in Physical Therapy Simmons College-Children's Hospital 300 Longwood Avenue Boston 15	†	†
MICHIGAN		
Virginia Wilson Curriculum in Physical Therapy The University of Michigan University Hospital Ann Arbor	†	†
MINNESOTA		
Darrell D. Hunt School of Physical Therapy Mayo Clinic Rochester		†
Wilbur L. Moen Course in Physical Therapy University of Minnesota 860 Mayo Memorial Building Minneapolis 14	†	

* Accepts women students only.

‡ Baccalaureate degree available from an affiliating college or university.

	Degree	Certificate
MISSOURI		
Sr. M. Imelda, S.S.M. Department of Physical Therapy St. Louis University 1325 South Grand Boulevard St. Louis 4	†	
Beatrice F. Schulz Department of Physical Therapy Washington University School of Medicine 660 So. Kingshighway St. Louis 10	†	
NEW YORK		
Dorothy L. McLaughlin Albany Medical College Division of Physical Therapy Albany 8	‡	†
Mary E. Callahan Courses for Physical Therapists Columbia University College of Physicians & Surgeons 630 West 168th Street New York 32	†	†
Elizabeth C. Addoms Physical Therapy Curriculum School of Education, New York University Washington Square East New York 3	†	†
Mildred F. Heap Program in Physical Therapy University of Buffalo 3435 Main Street Buffalo 14	†	†
NORTH CAROLINA		
Helen Kaiser Division of Physical Therapy Box 3403, Duke University Medical Center Durham		†
Margaret L. Moore Section of Physical Therapy School of Medicine University of North Carolina Chapel Hill	†	
OHIO		
Robert D. Kruse, D.P.E. Course in Physical Therapy Frank E. Bunts Educational Institute 2020 East 93rd Street Cleveland 6		†
Gladys G. Woods School of Physical Therapy Ohio State University University Hospital Columbus	†	†

* Accepts women students only.

‡ Baccalaureate degree available from an affiliating college or university.

	Degree	Certificate
OKLAHOMA		
Thelma Pedersen School of Physical Therapy University of Oklahoma, Medical Center Oklahoma City 4	†	†
PENNSYLVANIA		
Dorothy E. Baethke Division of Physical Therapy University of Pennsylvania 3901 Pine Street Philadelphia 4	†	†
Kathryn Kelley Curriculum in Physical Therapy D. T. Watson School of Physiatrics Leetsdale	‡	†
PUERTO RICO		
(All classes given in Spanish) Lutgarda V. Piñeiro School of Physical & Occupational Therapy Candelaria & Mandry Streets Stop 22, Santurce	†	†
TEXAS		
Doris E. Porter Grady Vaughn School of Physical Therapy Baylor University Hospital Dallas 1	†	†
Cecelia J. Lee School of Physical Therapy Hermann Hospital Houston 25	‡	†
Ruby Decker School of Physical Therapy The University of Texas Medical Branch Galveston	†	†
VIRGINIA		
Susanne Hirt School of Physical Therapy Medical College of Virginia Richmond 19	†	
WISCONSIN		
Beth J. Phillips Curriculum in Physical Therapy Marquette University School of Medicine 561 North 15th Street Milwaukee 3	†	
Margaret Kohli Course in Physical Therapy University of Wisconsin Madison 6	†	
U. S. ARMY MEDICAL SERVICE		
*Physical Therapy Course Army Medical Service School Brooke Army Medical Center Fort Sam Houston, Texas Write to: The Surgeon General Department of the Army Washington 25, D. C. Att.: Personnel Division		†

Please direct all inquiries regarding tuition, entrance requirements and other specific information to the school and *not* to the American Physical Therapy Association.

Abstracts

Gastrocnemius Recession: Five-Year Report of Cases

Luther M. Strayer, Jr. (144 Golden Hill Street, Bridgeport, Connecticut), J. BONE SURG., 40-A:1019-1030, October 1958

In 1950, the author presented a procedure for recession of the gastrocnemius in the treatment of cerebral spastic palsy: the procedure is described, again, in the current article. Although first thought of as an anatomicomechanical method, it proved to be more important, neurologically. The aim of the operation is to release the insertions of the biarticular gastrocnemius and plantaris from tension on the tendo achillis until the foot is in dorsiflexion to 90 degrees or more. The plantaris is included not for strength, but for neurophysiological considerations. Recession of the gastrocnemius allows dorsiflexion of the foot to initiate proprioceptive sensory stimuli in the soleus only, until the foot reaches 90 degrees, allowing gastrocnemius reflexes to function only at more than 90 degrees of dorsiflexion.

The author stresses the importance of three neuromuscular concepts. First, physiologists have shown that muscles contract isometrically, especially those which are biarticular. Second, proprioceptive impulses arise in muscles under tension, flow to the central nervous system, and modify muscle action. Third, decerebrate rigidity and the stretch reflex are greatly involved in patients with cerebral palsy.

Recession of the gastrocnemius is designed to remove the stimuli which orginate in the isometric, biarticular, antigravity muscles of the calf, and which initiate proprioceptive impulses. By eliminating these impulses, the vicious cycle of the stretch reflex is broken.

The patients on whom the author reports fall into two groups: Group I, with an average age of 3.7 years at the time of operation, including 16 patients who had never walked, and Group II, with an average age of 12 years at operation, including 7 patients, all of whom had walked in some fashion, preoperatively. In Group I, results are classified as *excellent*, in 12 (achieved balance and able to walk without the use of crutches or braces); *fair*, in 1 (able to walk effectively using braces and crutches); and *poor*, in 3 (no basic change in ability to walk). In Group II, the results obtained were 4, good; 1, fair; and 2, very poor.

In discussing results, the author states that "it is apparent that patients operated on before they have had an opportunity to develop an integrated pattern of posture have a better chance of being benefited by the operation," whereas, in the older group, "the labyrinthine reflexes have become established with [the] flexed position as the habitual position for balance. These children can never stand erect with the head in normal position without going through a distressing period of reeducation. Few are successful in this process because the pattern of function of the vestibular nuclei and the labyrinthine reflexes in connection with the stretch reflex is too firmly established."

The procedure is chiefly indicated in children with bilateral cerebral spastic palsy who are under 6 years of age and have never walked.

Chest Physiotherapy During Intermittent Positive-Pressure Respiration

L. H. Opie and J. M. K. Spalding (Respiration Unit, Department of Neurology, United Oxford Hospitals), LANCET, LOND., 7048:671-673, Sept. 27, 1958.

Intermittent positive-pressure respiration plays an important part in the treatment of respiratory paralysis, as weakened muscles are not able to clear sufficiently the bronchial tree of secretions.

Physiotherapy in the form of manual "vibration" to the chest wall followed by powerful compression of the chest can effectively aid in drainage of an involved lung. The therapist places his hands close together over the part of the lung to be treated. The "vibration" is given at the beginning of expiration and the forceful compression in the middle of the expiratory period. The whole procedure, which causes a rise in the esophageal pressure, accelerating expiration, is repeated with each breath.

There are two principal mechanisms involved. The first is raising the intrathoracic pressure as a whole, causing air to be rapidly expelled from the lungs, as in a normal cough. The second is the local compression of the consolidated lung, causing retained material to be squeezed out along the bronchus. This squeezing, however, is not sufficient to expel secretions through the tracheostomy, so that endotracheal suction is necessary to remove secretions when they have reached the larger bronchi.

Machines, designed to aid patients in coughing, do not simulate this squeezing of a consolidated lobe. Therefore, the vital part in physiotherapy of the chest is the direct squeezing of that part of the lung beneath the therapist's hands, pushing the secretions out into the main bronchi, and thus effectively aiding in removal of secretions from the involved lung.

Evaluation of Cardiac Function in Relation to Specific Physical Activities Following Recovery from Acute Myocardial Infarction

David J. Turell and Herman K. Hellerstein (Western Reserve University School of Medicine), PROC. CARDIOVASCULAR DIS., 1. 237-250, October 1958

The purpose of this paper is to review pertinent recent articles, and to discuss methods for the evaluation of cardiovascular function and for the formulation of prescriptions for life and work activities. The paper is divided into 3 parts:

1. Characterization of specific physical activities.
2. Evaluation of function and physical fitness of the patient recovering from acute myocardial infarction.
3. Application of clinical and laboratory evaluations.

Physical activities can be described in many ways—in foot-pounds, time motion studies, level of energy expenditure, position required, weight carrying or lifting, or the requirement of static or dynamic use of large or small muscles. The environmental stresses can also be measured—such as heat stress, the stress of cold, noise, dirt, improper lighting, dust and fumes. The physiologic costs of activity can be expressed in terms of cardiac output, oxygen consumption, heart beats per minute, blood pressure response and A-V oxygen extraction. Age and past training of the patient must be considered. The usual effect of myocardial infarction on cardiac function must be taken into consideration.

In the second part of the paper physical fitness and reserve are discussed. Physical fitness is defined as the capacity to perform satisfactorily certain muscular efforts. Reserve is the ability not only to perform satisfactorily at a given level, but also to have residual capacity to meet greater demands. Some methods of objective evaluation of the function and physical fitness of the patient are described. They include the Pulse Pressure method, the Master Two-step test, Bruce Treadmill and Step tests, the Nylin test and the Valsalva maneuver.

The third part of the paper then applies these clinical and laboratory evaluations to the individual patient. These measurements provide much useful information, but they must be used to supplement not supplant clinical judgment. Successful matching of the patient's physical and emotional capabilities with the requirements of work usually is possible. The job description, provided by the patient or his employer, and supplemented by estimates of energy and environmental factors, enables the physician to make a proper work prescription. There is no evidence that heart disese has been aggravated or caused by employment in properly selected jobs. And, in addition to the psychologic and economic benefits, work itself may improve physical fitness and perhaps the coronary circulation.

A long list of references follows the article.

Multiple Sclerosis and Allied Diseases in Japan

S. Okinaka, T. Tsubaki, Y. Kuroiwa, Y. Toyokura, Y. Imamura and M. Yoshikawa (University of Tokyo School of Medicine), NEUROLOGY 8:756-763, October 1958

Multiple sclerosis is said to be more prevalent in the temperate zones of North America, Western Europe, and Australia than in the subtropical or tropical zones of these same continents. Controversy exists as to whether susceptibility is related to race and national origin or to an environment factor that affects all races in the same geographic area equally.

As early as 1911 multiple sclerosis was said to be almost nonexistent in Japan and is at present generally believed to be rare among other oriental populations. The question was whether neurologic practice in Japan is going through the same stages as that in the United States some years ago. As late as 1921 multiple sclerosis was considered to be less prevalent in the United States than in Europe. Subsequent studies however, revealed that multiple sclerosis prevalence in the United States is about as high as in equally populated areas of Europe.

Two hundred and seventy cases of demyelinating diseases of unknown etiology were collected from various sources in Japan. Six were diagnosed as multiple sclerosis. The clinical features of these cases were similar to those observed in clinical series from other countries, though there was no confirmed autopsied case of chronic multiple sclerosis in this series. Of the 270 cases, 175 were diagnosed as neuromyelitis optica; 29 of these died and autopsy findings were compatible with neuromyelitis optica. The results of this study indicate that the incidence of multiple sclerosis seems to be more rare in Japan than in the United States.

Physical Medicine in the Treatment of Patients with Myocardial Infarction

Igho Hart Kornbluch, Eugene Michels and Samuel Baer (Department of Physical Medicine and Rehabilitation, Graduate School of Medicine, Graduate Hospital, University of Pennsylvania), CLINICAL M., 5: 1483-1489, November 1958

There is a distinctive trend against prolonged bedrest and enforced inactivity in the handling of a patient with acute myocardial infarction. Certainly mounting evidence favors a more liberal approach.

Convalescence from an acute myocardial infarction can be divided into three distinctive stages:

1. Period of absolute rest.
2. Gradual initiation of activities and bedside exercises ending with the ambulation of the patient.
3. Full rehabilitation with the goal of normal and productive life.

This program deals only with the second stage. Exercises based on energy expenditures must consider all somatic, psychic, social and environmental aspects. All of these findings are incorporated into a personalized program. For maximum benefits and a minimum of exertion, the scope, frequency, number, speed, and duration of each type of exercise also requires individual consideration. All active exercise should be executed very slowly with frequent rest periods. The patient must be carefully watched for signs of cardiac and circulatory distress. Close cooperation of the physiatrist and the physical therapist with the attending physician is of paramount importance.

A suggested program of exercises is included in this article. It is divided according to weeks. No exercises are given during the first week. Light passive exercises of all extremities are started in the second week. The program then progresses through the sixth week when the patient is doing active exercise, walking, ascending and descending stairs, and carrying on an increased scope of self-care activities.

Examination for Muscle Weakness in Infants and Small Children

Ernest W. Johnson (Children's Hospital, Columbus, Ohio), J. AM. M. Ass., 168:1306-1315, Nov. 8, 1958

To decrease difficulty and frustration, a systematic approach is recommended in the examination of children and infants with suspected muscle weakness. Emphasis of this paper concerns detecting weakness in those conditions affecting the motor unit, that is, the lower motor neuron and all the muscle fibers which it innervates. Upper motor neuron disorders can result in clinical weakness which may be demonstrated by the described technics, although spasticity and reflex changes along with other neurological signs are usually more important as diagnostic aids.

The technics which are used represent attempts to determine whether motor weakness can be detected in specific muscle groups. Steps in the examination are: (1) palpation of muscle bellies, (2) examination for muscle tightness, and (3) demonstration of muscle function. Separate considerations are made for the infant and the walking child.

Palpation is usually the first step in examining muscles. Tenderness and differences in consistency of the muscle mass may be revealed as a firm, steady, slowly increasing pres-

sure is applied over the thickest part of the muscle.

Muscle tightness often can direct attention to possible muscle weakness. It may be seen in either the affected muscles or their antagonists during passive movements.

In examination of muscle function, the child must be positioned so that the appropriate muscle group can lift its lever against gravity. Walking gives considerable information about motor function in the lower extremities, the trunk, and also the upper extremities. In detecting muscle weakness in infants, observation of spontaneous activity, elicitation of reflex activity, understanding of normal motor development, and ingenuity to stimulate specific groups provide a systematic approach.

The most successful method to date for localizing and detecting motor unit abnormalities is the electromyographic examination. This is a detailed article, contains many good illustrations, and a long list of references.

Vocational Status Following Chemopallidectomy and Thalamectomy for Parkinsonism: 1. The Problem and Initial Findings

M. Riklan (Chief, Psychological and Vocational Services, St. Barnabas Hospital, New York, N. Y.) L. Diller, Z. Laszewski, and I. S. Cooper, ARCH. PHYS. M., 39:634-640, October 1958

Due to recent advances in neurosurgical therapy for parkinsonism, there has been concomitant progress in vocational rehabilitation. The operation is known as chemopallidectomy which comprises the insertion of alcohol in the globus pallidus and in some cases, the ventrolateral nucleus of the thalamus. When successful, this procedure alleviates symptoms of tremor and rigidity. The authors present an analysis of 108 consecutive patients who had chemopallidectomies.

The control group or nonoperated group of patients with Parkinson's disease numbered 171. Information concerning age, sex, education, length of illness, vocational background and status was secured by the questionnaire method. The two groups were found to be essentially equivalent in regard to educational achievements and length of illness. There was the same percentage of bilateral symptomatology in both groups. The control group patients had available to them all the conventional rehabilitation and medical therapies aside from surgery.

The results of the data secured from the questionnaires are provided in table form. In essence, the majority of patients in the unoperated group had to change their basic occupation as a result of their disease. Fifty-five per cent were forced to discontinue work entirely because of the progression of symptomatology. The postoperative group maintained employment status while the unoperated group deteriorated in this regard.

The authors feel that the surgery has thus served to halt the progressive deterioration of all functioning associated with Parkinson's disease.

Management of Chronic Dependency in Out-Patient Clinics by a Comprehensive Medical-Psychiatry Service

H. H. Garner, A. J. Simon, M. S. Handelman (Chicago Medical School and Mt. Sinai Hospital, Chicago), J. AM. GER. SOC. 6:623-631, August 1958

A common, and often most distressing and frustrating problem is the patient who is ill, attends the outpatient clinic regularly, reports his aches and pains faithfully, comes even more frequently than requested, and yet doctors can find only a limited basis for the many complaints. These patients are referred from clinic to clinic in the hospital, receive many examinations, many series of laboratory tests and X rays. It is an expensive procedure, consuming many hours of medical and pharmaceutical time and yielding little information to warrant the amount of "illness" actually experienced. As these patients get older, a great deal of their time and energy is taken up with illness. To tell them they are not sick and need not come back is hardly possible. To refer them all to psychiatry as "mental cases" is neither practical nor helpful.

The results of a two year study (1954-1956) of patients who have been attending the outpatient clinics of Mt. Sinai Hospital in Chicago for over two years and had averaged one or more visits a month during that time are included in the article. One hundred and ten patients were exhaustively reviewed medically, socially, economically, and psychiatrically. Because the ages of these patients ranged from 50 to 80 years, the problem was primarily a geriatric one. About half the group showed distinct signs of early senility manifested by withdrawal from social contacts, diminution of activity, and an increased preoccupation with their bodies. One fourth of the group had clear-cut emotional disturbances of long standing that could be diagnosed as standard psychiatric disorders which had gone unnoticed and untreated. The remainder of the group represented simple immaturity and personality dependence.

The Social Service department explored available community resources in an attempt to enlarge the social life of these people. Very soon 19 patients were active in recreation, Golden Age groups, hobby centers, or Synagogue activities. Four of these patients actually became employable and found regular work. Thirty-six patients were so dependent on the hospital that they refused to join outside groups but agreed to attend group therapy sessions led by the psychologists and social workers.

The important finding was that something constructive could be done sociopsychologically for about half the group. On the basis of this study the Mental Health Fund of the State of Illinois agreed to support a special Comprehensive Medical-Psychiatry Clinic. The staffing plan provided for (1) an internist, (2) a psychiatrist, (3) a psychologist, and (4) a social worker.

The clinic got underway with a transfer of 151 cases from the 5 most frequented outpatient clinics (medicine, cardiac, gastrointestinal, metabolism, arthritis). In one month 201 cases were referred bringing the total to 352. New cases referred proceeded at a monthly rate of 25.

All patients were seen by one physician, Dr. Milton Handelman, an internist. The patients were delighted to have all their illnesses correlated and treated by one observer.

Tabulating the results, the following important data is revealed:

1. Instead of visiting 5 clinics 307 times, the patients visited the CMC 192 times, a drop of 37 per cent.
2. These same patients who had attended other clinics 329 times, made 223 CMC visits—a drop of 32 per cent.
3. The decline in emergency visits to the house doctor was 24 to 35 per cent.

The favorable experience of the

clinic, its acceptance by the other clinic services without discernible untoward effects led to the establishment of the clinic as a permanent feature of the Outpatient Department, financed by hospital funds.

The authors also point out the potential teaching advantages of such a clinic in orienting medical students and residents to the social environmental factors promoting illness. Too often the aged, chronically ill patient is received with irritation and pessimism. The removal of such patients from conventional teaching clinics created a more favorable setting for teaching in the area of geriatrics.

Nerve Injuries in the Upper Extremity

Robert D. Larsen and Joseph L. Posch (Department of Surgery, Wayne State University College of Medicine, Detroit), A.M.A. ARCH SURG., 77: 469-482, October 1958

This paper is a review of the treatment of 325 nerve injuries in the upper extremity between January 1950 and January 1957.

The methods of diagnosis of these injuries are briefly discussed. The operative technics are described to a greater extent, with the following points being stressed. An accurate end-to-end suture is mandatory. The suture passes only through the nerve sheath with the knots tied outside the nerve. Rotation of the two ends in their relation to each other should be avoided. Care should be taken to avoid tension on the suture line. When the gap between the nerve ends is so large that it cannot be overcome by mobilization of the nerve, nerve graft is necessary. The sural nerve is the donar nerve of choice. When conditions permit, it is best to repair injured nerves immediately or primarily. These results are somewhat better than the results of secondary suture.

Tinel's sign will aid the evaluation of sensory nerve regeneration. Electromyography will give some information about the state of paralyzed muscles which cannot be obtained in any other way. It will give evidence of reinnervation before there is any clinical sign of regeneration. However, too great reliance should not be placed on electromyography. The exploring electrode may encounter isolated areas in the muscle which show a pattern of regeneration while the major portion of the muscle is not being satisfactorily reinnervated. The opposite is also true. Therefore, electromyographic studies must be correlated with the clinical observations.

The authors followed the general rule of splinting after surgery, so that the suture line in the nerve is relaxed. This is continued for 4 weeks. After this, gradual motion can be allowed. The various splints used for the various nerve lesions are described.

Electrical stimulation of the paralyzed muscles was not used routinely on these patients. Stimulation of the muscles 6 days a week until recovery occurs is not ordinarily practical in private practice. The patients who did receive electrical stimulation were treated 2 or 3 times a week, and no benefit could be detected on this reduced schedule.

It was found that paresthesias, numbness, tingling, and various bizarre sensations usually appear before the return of true sensation. The paresthesias are followed by hyperesthesia. This gradually subsides, and relatively normal sensation appears. Two-point tactile discrimination is the sensation which most frequently fails to return to normal.

Return of motor function is most satisfactory in the radial nerve and is satisfactory in one half to two thirds of the cases in the median nerve at the wrist. Motor return is uniformly unsatisfactory in the ulnar nerve lacerations, regardless of where they are encountered.

Therapeutic Contributions of the Doctor of Physical Medicine

Leslie Blau (200 Court St., Binghamton, New York), J. AM. M. Ass., 168:1217-1220, Nov. 1, 1958

The functions of a physiatrist include administration, diagnosis, therapy, and research. A great many other factors deserve consideration if he is to effectively attain the desired therapeutic goal. For successful therapy it is necessary that he choose modalities, specify times and intensities, guide proper psychiatric approach to the patient on the part of all who give treatment, and adjust the treatment to the needs and responses of the patient.

Two case histories illustrate how lesser physical ailments can lead through circumstances to prolonged disability and how physical therapy based on correct diagnosis can relieve the physical condition and rehabilitate the patient.

If valuable methods of treatment are not to be misused and neglected, physicians must prepare themselves to use the modern clinical approach offered by physical medicine and to avail themselves of the necessary ancillary services.

An Evaluation of Electrodiagnostic Testing

Arthur L. Watkins (Harvard Medical School, Boston), N. ENGLAND J. M., 259:868-873, Oct. 30, 1958

This article presents a clinical evaluation of modern electrodiagnostic tests based on the author's 18 years of experience of nearly daily testing in several thousand cases.

Electrodiagnostic tests are of interest whenever there is a question of lower motor neuron involvement. The author presents the essentials of a number of electrodiagnostic tests used in modern clinical laboratories.

Direct Current Test

The response of muscle to direct current is of practical value in determining the status of innervation. Normal muscle responds to an impulse from the negative pole with a characteristic brisk twitch and prompt relaxation. Skeletal muscle without a nerve supply maintains excitability to direct current but the response is slow, less powerful, and has a delayed relaxation.

Tetanizing Currents

These currents are useful for quick demonstration on intact nerve supply. Faradic current, alternating sine wave current (60 cycle alternating current) or unidirection square waves with a frequency between 50 and 200 per second, will produce tetanic contractions if the nerve supply is intact. Denervated muscles fail to respond because the duration of the individual impulses of the stimulating current is shorter than the chronaxy of denervated muscle.

Chronaxy

The measurement of chronaxy provides a quantitative index of electric excitability. An increasing chronaxy indicates degeneration of motor nerves. A decreasing chronaxy is indicative of regeneration.

Strength—Duration Curves

This test provides more complete information concerning electric excitability. A constant current and rectangular wave form with impulses that vary from 0.01 to 100 milliseconds is used to plot a series of points representing threshold response at the varying duration of impulses. Discontinuities or flat spots in the curve are early signs of reinnervation.

Accommodation

Normally innervated muscle when stimulated by a current that slowly increases in intensity accommodates to the change and fails to respond to intensities well above those causing a contraction when the current is abruptly applied. Denervated muscle does not accommodate as does innervated muscle.

Galvanotonus and Tetanus Frequency

During a continuous flow of direct current denervated muscle gives a tetanic contraction. The ratio of current necessary to produce such a contraction in normal muscle as compared to denervated muscle is known as the galvanic-tetanus ratio.

Normal and denervated muscle also respond differently to repetitive currents with increasing intervals between impulses.

The author describes his own method for measuring tetanus frequency which he uses to differentiate normal and denervated muscle. Fifty millisecond square waves are used and the intensity of current adjusted so that contractions are easily observable and nonpainful. The frequency of repetitions is increased until tetanus is observed. Normally this is 30 to 100 repetitions per second, whereas denervated muscle requires only 5 to 10 repetitions.

Electromyography

Electromyograms recorded visibly on a cathode-ray oscilloscope and audibly with a loud speaker are becoming established as a technic of electrodiagnosis, but are incomplete without testing of electric excitability.

The tests of electric excitability and electromyography are of value in various injuries and diseases of lower motor neurons. Illustrative case histories are reviewed.

An interesting technic has recently been developed for measuring conduction of nerve impulses of peripheral motor nerves. The nerve is stimulated percutaneously, and the muscle contraction is picked up by cutaneous electrodes. The electrical stimulus triggers a single sweep of the cathode-ray oscilloscope, which is photographed. The stimulus artifact and action potential of the muscle contraction are recorded. Two points on the nerve may be used to stimulate, and conduction times compared, thus helping to localize the lesion.

The selection of tests should be left to the clinical acumen of the specialist conducting the tests, and they should be performed and interpreted by him.

Arthritis: The Use of Physical Therapy as an Aspect of Treatment

E. P. Reese (Lynwood, Calif.), CALIFORNIA M., 89:204-209, September 1958

Physical therapy measures can be used not only to control the inflammatory stage of arthritis, but also to prevent the effects of the disease (contractures, muscular atrophy, deformity, osteoporosis) and to instruct the patient in functional activities.

Heat, ultrasound, and therapeutic baths, when not contraindicated, relieve pain, spasm, increase circulation, and permit greater freedom in passive and active exercise.

Muscular atrophy from rheumatoid arthritis is greater than atrophy from disuse of muscles; hence, resistive exercise is important. Resistive exercises may be provided manually, or by the use of sandbags, dumbbells, or pulley systems.

In active joint inflammation, strengthening of surrounding skeletal muscles aids in support of the joint. Patients should be relieved of undue stress and trauma by planned rest, splinting, and proper bed positioning to prevent contractures and deformity. Weight bearing and ambulation are considered in respect to possible damage and strain to involved joints and ligaments.

Rheumatoid spondylitis results in limitation of motion of the back and chest wall, flattening of lumbar curves, dorsal kyphosis, and neck deformity. Heat, ultrasound, breathing and postural exercises, and proper positioning relieve pain and control deformity. Back extensor exercises are preferable to bracing in limiting curvature of the spine.

Osteoarthritis may result from prolonged joint irritation or trauma (overweight affecting weight bearing joints). Passive, active, and resistive exercises are indicated to relieve pain and spasm.

In degenerative diseases of the hip, treatment is aimed toward decreasing trauma to the hip and conservative weight bearing is advised.

Occupational therapy, in addition to ameliorating extreme depression, agitation, or anxiety, improves muscle strength, range of motion, work tolerance, and mental status through creative and productive activity.

As rheumatic diseases lead all other diseases and disorders in workdays lost, rehabilitation of the patient to become a productive member of society or a more self-sufficient individual is important from both the economic and humanitarian aspect.

The Regeneration of Body Parts

Marcus Singer (Cornell University, Ithaca, New York), SCIENTIFIC AMERICAN, 199:79-88, October, 1958

By means of experiments with the salamander and the frog, the author and his colleagues investigated the question of "how it is that a salamander can regrow an amputated limb but a higher animal cannot." Observation of the regeneration of salamander legs has shown that, after healing of the initial wound has taken place, the process of regeneration resembles embryonic development. Despite the striking similarities between regeneration and embryonic development, the two processes differ markedly. The most notable difference is that the new organ is developing in close relationship with adult tissues; the embryo grows either apart from the adult or screened from its tissues. Each of the adult tissues must play a part in the development of the new structure: some alteration in the activity of one or more tissues could account for inability to regenerate. Many experimental studies have been devoted to the role of one or another adult tissue; this author's particular interest lies in the role of nerve tissue in regeneration.

It was discovered in 1823, and has been repeatedly confirmed since that, if the nerves leading to the stump of the amputated limb of a salamander are cut so that the stump becomes insensitive and paralyzed, the limb does not regenerate. Regeneration of parts in fishes and in lower forms

such as worms and crayfish may be inhibited in the same way.

How nerve assists regeneration is poorly understood, but it is suggested that nerve fibers give off substances which promote growth. A technic recently developed in the author's laboratory at Cornell University permits the infusion into regenerated tissue of chemicals known to paralyze nerves; this procedure blocks growth. It is hoped that further study, using this technic, will reveal the nature of the nerve factor.

The author states further that regeneration is not dependent on the kind of nerves present, but that the number of nerve fibers is important. The young tadpole can regenerate a tail or limb easily and completely; this ability gradually decreases until, in the young adult frog, it is lost. It has been shown that if the number of nerve fibers at the surface of an amputation is reduced to a fourth or a half, regeneration does not take place. Recent work at Princeton has shown that in the tadpole with growth, there is a relative decrease in the number of nerve fibers in proportion to the volume of other tissues which parallel loss of regenerative capacity.

To evaluate further the influence of the number of nerve fibers on regeneration, the author and his colleagues freed the sciatic nerves of frogs from the hind limbs and brought them, subcutaneously, into the proximal parts of amputated forelimbs, without destroying connections with the central nervous system. In each case, in the presence of an increased nerve supply, regeneration took place. The evocation of regeneration in the limb of the frog strengthens the possibility that ways of inducing regrowth in still higher forms may be found.

Peculiarities of Symptomatology in Chronic Poliomyelitis Patients

A. Y. Sweet (Mt. Sinai Hospital, New York City), J. MT. SINAI HOSP. N. YORK, 25:405-410, September-October 1958

More poliomyelitis patients with respiratory paralysis survive today due to advances made in mechanical artificial respiration and to a broader understanding of pulmonary physiology. More patients will be discharged from hospitals and come under the care of private physicians. Hence, the peculiar symptomatology exhibited in the chronic poliomyelitis patient should be considered.

Severely paralyzed patients are particularly vulnerable to pyelitis, pyelonephritis, ureteral obstruction, pneumonia, lung abcess, and phlebitis. The extensive damage to the neuronal system often results in patients' failure to respond to such illness in a familiar manner, (pain, fever, and localization of symptoms).

Pain is often absent in illness where pain is a major manifestation. Chronic polio patients sometimes experience no pain with ureteral obstruction, peritonitis, hemorrhagic pancreatitis, and esophageal and gastric ulceration. Such lack of pain is not due to loss of pain perception (all patients observed experience pain during physical therapy or cystoscopic examinations or from pin prick). There seems to be a diminution in visceral pain sensation. Conversely, there are certain conditions which seemingly never fail to cause pain (phlebitis, otitis media, decubiti, sinusitis, paronychiae, and physical trauma).

Absence of a febrile response to infections and inflammatory conditions occurs frequently in severely involved persons. Patients failing to elicit a febrile response at one time may do so under the same conditions at other times. It is thought that a greater than ordinary pyrogenic stimulus is necessary to produce a rise of body temperature in these patients. The chronic patient "normally" has a lower body temperature than has the average person—about 97.4 degrees to 98.0 degrees F. orally. Consequently temperatures rarely range over 102.0 degree F. Thus, elevated temperatures should be related to the over-all temperature pattern.

In the absence of localized pain, a vague "displaced" or gastrointestinal complaint may be the only indication of an abnormality of function. Gastrointestinal symptoms are due to adynamic ileus, gastric dilation, or both. Because of its relationship with emotional states, gastric distention is the most common gastrointestinal symptom. Studies have revealed that some chronic poliomyelitis patients have an abnormality in central control of gastric tone and secretion. Whether organic illness per se produces gastric dilatation is difficult to determine as it is encountered when marked anxiety and apprehension are present.

Two case studies are cited illustrating difficulties in reaching proper diagnosis in chronic poliomyelitis patients.

A Survey of Vocational Opportunities for the Retired Army Physical Therapist

M. J. Torp (Letterman Army Hospital, San Francisco), report published by the University of Colorado, 1958, 85 pages.

Occupational briefs make up the bulk of this report, permitting quick comparison of physical therapy occupations with other occupations. It would appear unrealistic for any physical therapist to leave the profession in view of the opportunities in the physical therapy field and the need for skilled workers. Physical therapists can more readily meet requirements for advancement and versatility in their field than meet requirements for entrance into other occupations with comparable rewards.

The briefs on physical therapy occupations which best meet the needs and qualifications of the physical therapist over 40 years of age are summarized:

Physical Therapy Supervisor supervises the performance of one or more staff physical therapists; responsible for administrative functions as well as direct patient care. Necessary preparation is a physical therapy certificate, 3 to 5 years experience, and training in a specialized clinical area, courses in supervision, or experience in a specialized clinical area or in supervision. Advancement depends on administrative ability. Annual earnings are $5,000 and up, including variable fringe benefits. Nationwide outlook for employment is good, with 181 available positions listed as of May 1, 1958, with the American Physical Therapy Association job placement service.

Physical Therapist Employed by Public School System is responsible for patient care as prescribed by physician and planned in cooperation with educational program. Upper age limit for entrance (the only one specified for physical therapists) is 45. A teacher's certificate is required in some areas, in addition to physical therapy certificate. Salary median in 1956 was $4,500, including fringe benefits such as retirement plan and long summer vacation. Nationwide outlook for employment was limited, with 34 available positions listed.

Physical Therapy Supervisor in Public Health Area gives direct service to patients, teaches individuals and groups, consults with other professional workers and organizations, and plans on city, county, state, or nationwide basis. Qualifica-

tions include ability to drive an automobile and cope with all types of weather and road conditions. A Civil Service examination is frequently required. Necessary preparation includes a physical therapy certificate, minimum of 2 years full-time paid experience in physical therapy including 1 year in a hospital or clinic under the supervision of a qualified physical therapist and 1 year which has included some supervisory or administrative experience. Earnings are $5,500 and up, including fringe benefits such as retirement plan, educational leave, sick benefits, and 4 week vacation. There is a good outlook for nationwide employment, with 41 available positions listed.

Physical Therapy Instructor teaches physical therapy subjects to physical therapy students and supervises their clinical practice. A bachelor's degree, physical therapy certificate, and 3 years general clinical experience are necessary. Specialized training in a clinical area, specialized experience in a clinical area, and 3 years general advanced study, preferably at graduate level, including courses in educational methods and testing, are desirable. Earnings are dependent on school policies, but include liberal fringe benefits such as retirement plan, opportunity to attend professional conferences, hospital insurance, sick leave, and 4 week vacation. Nationwide outlook for employment is limited, with 12 available positions listed.

Physical Therapy Consultant directs, coordinates, or provides services in connection with physical therapy departments or services; may have administrative responsibilities and liaison activities in employing personnel and in teaching. Ability in verbal and written expression is essential to qualification. Bachelor's degree, physical therapy certificate, 5 to 10 years of experience, and graduate work in a clinical area, in supervision, or in education leading to a master's degree are necessary. Special training in a clinical area, master's degree, experience in a clinical area, and supervisory experience are desirable. Annual earnings are $6,000 and up, with fringe benefits including retirement plan, 3 to 4 week vacation, sick leave, and attendance at regional and national meetings. The nationwide outlook for employment is limited, with 25 key positions available throughout the nation.

Staff physical therapy positions may prove unsatisfacory for the older physical therapist because of the physical demands of these positions or, more likely, the sometimes difficult personnel relationships encountered when an experienced person takes an essentially beginning level position. The Public Health Service director noted that entry jobs in that service would be definitely unattractive to the experienced older physical therapist. The nationwide outlook for employment in staff positions is good, except in the Mountain States.

Occupations most suitable for the older physical therapist who wishes to change professions are those utilizing medical background. Occupations in this area requiring less than 2 years additional training for the average physical therapist to enter include medical record librarian, speech therapist, medical technologist, occupational therapist, medical social worker, rehabilitation counselor, and medical librarian. Training in some of these occupations is not ordinarily open to the applicant over 40 years of age, but the need for workers in all these occupations is so great that exceptions are possible, at present.

Our Abstracters for February

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Rachel Adams — Janice Heidenreich
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Ethel Coeling — Miriam Partridge
Sue Langford — Catharine Graham
Jean Thibaut

Book Reviews . . . . .

Synopsis of Regional Anatomy, *By T. B. Johnson, C.B.E., M.D., Emeritus Professor of Anatomy, University of London, Guy's Hospital Medical School. Ed. 8. Cloth; price $6.00. Pp. 450; illus. Lea & Febiger, Philadelphia, 1957.*

This text, which is concerned with a description of the anatomical structures as seen in dissection, covers the entire body and is divided into seven sections. Each section, except the seventh, deals with a regional approach to dissection. Section seven contains an excellent review of the bones of the body. The regions considered are the upper extremity, the lower extremity, the thorax, the abdomen, the head and neck, and the central nervous system and special senses.

Each section deals with the anatomical structures as they appear in the dissection of the area. The text is not written as a guide to the actual dissection, however, nor does it include diagrams and photographs which can be followed in doing dissection. It is designed to call to mind each structure and its relationship in the area after a dissection has been finished. Dr. Johnson has been extremely successful in meeting this purpose. His descriptions are so vivid that one can readily visualize the structures and the sequences in which they appear. With this purpose in mind, the author suggests that the book is to be used after the dissection of the area has been completed to revise the area for review. Thus, it will not replace a dissection manual but is of value in augmenting the knowledge which the student retains.

Occupational and physical therapists will be interested in the inclusion of the origin, insertion, peripheral nerve supply (segmental supply to muscles not given) and action of the skeletal muscles in each area. These points are presented interestingly and concisely; however, in some instances, the muscle action is not given in complete detail. A short discussion of muscle contraction regarding agonistic, synergistic, and antagonistic action is given. The articulations are described briefly from the standpoint of classification, structure and function. Some excellent X-ray plates are used to clarify this discussion. A review of the bones includes the bony landmarks and their function, the ossification pattern of each bone, and a suggestion for palpation of certain bones and landmarks. Surface anatomy is further emphasized by plates of the external surface of each area in which various superficial vessels, bony landmarks, muscle bellies and tendons, and segmented nerve supply to the skin are pointed out.

The sections on the thorax and abdomen include a description of the walls and of each structure as it appears in approaching the dissection from the anterior. Each organ which can be removed and dissected is then described in detail. The author suggests using the text while this dissected material is still at

hand so that the removed part can be replaced for relationships to other structures.

Section six is a complete coverage of the central nervous system and sensory organs. Figures showing schematic representations are used for clarity in many areas of this section.

This complete coverage of the anatomy of the body is of value to therapists who wish a quick review in order to visually recall the total picture of the structures and their relationship in any area. It is also of value to students as a review of an area after it has been dissected.

Rehabilitation: A Community Challenge. *By W. Scott Allan, Supervisor of Medical Services, Liberty Mutual Insurance Company, New York. Chairman of Rehabilitation Council, and member of Budget Allocation Committee of United Community Services of Greater Boston; President of Massachusetts Chapter of Rehabilitation Association. Member of International Society for Welfare of Cripples and American Public Health Assocation.* Cloth; price $5.75. Pp. 247; illus. John Wiley and Sons, Inc., New York, 1958.

As the title indicates, the emphasis in this book is on community responsibility in providing effective rehabilitation service for the disabled. This is presented as a typically American democratic "grass roots" approach to that service which apparently is in ever increasing demand.

The organization of the material may be described as being historical in its approach as most of the chapters are introduced with background material which indicates the origin and development of the specific service under discussion; the author then attempts to show how this specific service becomes a part of the over-all current movement of community rehabilitation service. The strongest emphasis appears to be on the medical and paramedical fields with the physician assuming the leadership role in the rehabilitation team. Although physical therapy is recognized as an essential part of the rehabilitation process, the space devoted to this is minimal with a much greater emphasis being given to the place of the rehabilitation nurse. The weakest emphasis appears to be in the area of vocational placement if one expects to use the book as a guide in providing such service.

Approximately the first two thirds of the book is devoted to the description of the different services which go to make up a complete rehabilitation program, each of which is approached in the same careful way using authenticated history on how the service came into being and how it gradually evolved to its present place in the scheme of rehabilitation. The one chapter in this section of the book which differs is that entitled "Integration of Services," where the approach is more philosophical than historical, and an attempt is made to show how all of the services essential to rehabilitation are brought together into an effective community force. This is followed by a chapter on social laws relating to rehabilitation which in the reviewer's opinion was written with less vigor and interest than the remainder of the book.

The final one third of the book can be considered more in the nature of a guide or handbook to be utilized by community leaders who may be interested in organizing and developing rehabilitation services for their disabled citizens. In the concluding chapter 12 principles are given which in essence provide the summary of the author's concept of rehabilitation as a community challenge.

Synopsis of Pathology. *By W. A. D. Anderson, M.A., M.D., F.A.C.P., F.C.A.P., Professor of Pathology, University of Miami School of Medicine; Director of Pathology Laboratories, Jackson Memorial Hospital, Miami, Florida.* Ed. 4. Cloth; price $8.75. Pp. 829; illus. C. V. Mosby Co., St. Louis, 1957.

This new fourth edition of Dr. Anderson's famous text continues the fine reputation earned by his preceding editions. Long a necessary and standard reference and textbook, this recent revision brings up to date a wealth of important information.

There is hardly a section of this book which does not show changes or additions in both text and illustrations, to include recent medical advances. As in previous editions, *Synopsis of Pathology* begins with a thorough and detailed chapter on tissue inflammation and repair, providing the essential background information for understanding all pathological processes. Subsequent chapters cover specific disturbances, bacterial infections, and viral diseases.

Of a convenient size and weight, the book invites frequent consultation. The format of this text makes it particularly convenient to use. The type is easy to read and the frequent variation in headings and editorial matter provides a quick reference tool.

This text will continue to serve as a necessary and useful reference in every medical library.

Self-Help Devices for Rehabilitation. *Project conducted by New York University-Bellevue Medical Center, Institute of Physical Medicine and Rehabilitation. Paper Leatherette; price $4.75. Pp. 418; illus. William C. Brown Company, Dubuque, Iowa, 1958.*

Self-Help Devices for Rehabilitation is a manual prepared as a cooperative service project conducted by New York University-Bellevue Medical Center, Institute of Physical Medicine and Rehabilitation, and made possible by a grant from the National Foundation. The manual is of loose-leaf style to allow for rearrangement or addition of pages as subsequent reports are made. This volume contains the complete information on self-help devices previously issued in eight separate reports under the same auspices. It represents the results to date of a continuing study by the Institute of Physical Medicine and Rehabilitation on self-help devices using all possible contacts as sources of information, namely: medical libraries, hospitals, clinics, rehabilitation centers, U. S. Patent Office, shops, mail order catalogs, patients, physicians, and private individuals. The purpose of the study is to make available the knowledge of all existing inventions and discoveries in the field thus helping the handicapped to find some tool by means of which he may derive greater independence, efficiency, or comfort.

The manual consists of two sections: 1) Activities of Daily Living and 2) Therapeutic Exercise. A third section, Industrial Aids, is pending. Within these sections, the devices are classified according to their purpose and analyzed in respect to their functional use or therapeutic purpose. Under activities of daily living, the following eight sub-

divisions are covered: self-care, communication, transfer and travel, household equipment, household adjustments including floor plans, recreation, prevocation and vocation, and a miscellaneous grouping such as reaching, sewing, carrying. Under therapeutic exercise, the following five subdivisions are covered: devices designed to increase strength, speed and endurance, to increase range of joint motion, to increase coordination, to aid in locomotion, and to splint. Since braces and prosthetics are prescribed by the physician and made to order, they are not included in the present study.

With each device, there is a picture and title; there is also information regarding source, description, cost, use and commercial availability. The devices range from the very simple and inexpensive such as homemade feeding and dressing aids, to the elaborate and costly body lifts and electric page turners. The pictures are large and clear and the descriptions concisely written. Although there is no index as such, it is a simple matter to locate a desired device by consulting the outline on the functional distribution of devices.

To the knowledge of this reader, the manual is the most complete source of self-help material printed to date and will be of great value to all personnel who share responsibility in the care and training of the physically handicapped. It will also be helpful to the patient himself, especially the one who has lived with his disability long enough to know his capabilities and needs, who may even create something new from an idea thus received.

Growth and Development of the Young Child. *By Rand, Sweeney, and Vincent. Revised by Marian E. Breckenridge, M.S., Physical Development and Nutrition, Merrill-Palmer School, Detroit; and Margaret Murphy, Ph.D., Child Development and Family Life, Purdue University, Indiana. Ed. 6. Cloth; price $5.50. Pp. 548; illus. W. B. Saunders, Philadelphia, 1958.*

The authors of this current revision of Rand, Sweeney, and Vincent's *Growth and Development of the Young Child* present an interpretation and integration of the current research from the fields of medicine, nutrition, psychology, and education as it relates to growth and development with the focus on the whole child.

The basic concept is that, "Children follow sequential patterns in the various aspects of their development. This individuality is the product of the interplay of potentialities and environment. Various aspects of development are interrelated so that one aspect of development affects and in turn is affected at various times to various degrees by other aspects of development." These ideas are developed clearly and logically to show the individuality of the child and the need for flexibility in child care.

This book with its wealth of material on growth and development, the whys of growth and behavior, and a bibliography of 932 references as well as a film listing will be a valuable reference test for the physical therapist working with children.

New Frontiers of Aging. *Edited by Wilma Donahue, Project Supervisor and Chairman, Division of Gerontology, Institute for Human Adjustment; Lecturer in Psychology, University of Michigan. And Clark Tibbitts, Chairman, Committee on Aging, U.S. Department of Health, Education and Welfare. Cloth; price $5.00. Pp. 209. University of Michigan Press, Ann Arbor, 1957.*

This book has two major divisions —today's knowledge and emerging concepts. The chapters within each division are written by authorities in their fields. By and large the chapters are well written with duplication kept to a minimum.

The first section uses automation as a means of explaining why our retiring population is increasing in comparison to our total population. This is followed by a survey of what is presently being done in regard to medical care for the aging, both in this country and in Europe.

The second section is largely concerned with refuting several axioms pertaining to sociological, economic, and psychological aspects of retirement. The economic discussion is well worth reading.

This book comes closer than many in recent years in presenting current thought on the problems of aging to those who want to know and are seeking a base from which to plan.

The reviews published here do not necessarily represent the opinions of the American Physical Therapy Association.

Our Book Reviewers for February

Eleanor J. Carlin, Associate Professor and Assistant Director, Division of Physical Therapy, School of Allied Medical Professions, University of Pennsylvania, Philadelphia.

Edward A. Fitting, Ph.D., Administrative Field Representative, Michigan Crippled Children Commission, Lansing.

James E. Griffin, Associate in Physical Therapy, Division of Physical Therapy, University of Pennsylvania, Philadelphia.

Deborah Kinsman, Assistant Director, Physical Therapy Department, Vanderbilt University Hospital, Nashville, Tennessee.

Roxie Morris, Associate Professor, Physical Therapy Department, University of Southern California, Los Angeles.

Jessie F. Waddell, Chief, Orthopedic Nursing and Physical Therapy, Michigan Crippled Children Commission, Lansing.

What's New . . . . . .

20. Talking Books

Libraphone "Talking Books" are complete books, novels, and stories recorded in 16⅔ rpm phonograph records. Each side of a 12 inch disc provides almost one hour of continuous reading. The readings are by professionally trained persons and offer recreational therapy for the acute and chronically ill, the aged, and the handicapped.

Each volume comes in a sturdy, attractive album of three to six records. Average listening time per book is six hours. The records can be played on a special slow-speed "Sonograph" or on any four-speed phonograph. A special adapter is also available to convert existing three-speed players to the slower speed. J. A. Preston Corp.

21. Booklet for Handicapped Women

U. S. Department of Labor, Women's Bureau Pamphlet Five, *Help for Handicapped Women* written for general interest, relates the work being done to aid handicapped women. Four stories include: A new life for "Connie," a new life for the homemaker, a new project for women's clubs, and a new career for women. The pamphlet is available at a cost of 40 cents per copy from Government Printing Office.

For more information on items write to The Physical Therapy Review, 1790 Broadway, New York 19, N. Y.

New items which may be of interest to physical therapists will be mentioned in these pages each month. The accompanying explanations are made by the manufacturers and have not been investigated by the *Physical Therapy Review.*

22. Circular Slide Rule

Circular Slide Rule is a handy device for use by anyone who must perform simple calculations. Operation of this convenient, pocket-size calculater is simple and the results are accurate. To multiply, divide, and find proportions is easy and exceptionally fast. Complete easy-to-follow instructions will be included with each slide rule. General Industrial Co.

Important Notice

Increased postal rates and rising production costs have made it necessary to increase subscription rates.

The *Review* has not increased its rates in 10 years! However, costs of publication and mailing now exceed income—and the new rate change will take effect on

May 1, 1959

Nonmember subscriptions	$7.00
Foreign subscriptions (including Canada)	8.00
Single issues	1.00

Had you planned to complete your volumes of the *Review*—get back copies for your library, school, or a research project ? ?

Order *before* May 1st

and take advantage of the old rates.

(*continued from page* 113)

Mildred Elson. Judging by her abounding vitality, Miss Elson will long continue to be a potent force for advancement of physical therapy around the world.

The reception was held at the Institute of Physical Medicine and rehabilitation of the NYU-Bellevue Medical Center, in their new quarters on the sixth floor.

Coming Meetings

February 11-13	American Academy of Occupational Medicine, Boston
February 16-18	Congress on Industrial Health, Netherland Hilton Hotel, Cincinnati
March 9	National Multiple Sclerosis Society, New York City
March 17-19	National Health Council, Palmer House, Chicago
March 23-25	New England Hospital Assembly, Hotel Statler, Boston

Positions Available

QUALIFIED PHYSICAL THERAPIST for outpatient cerebral palsy treatment center. Liberal salary. Two months' vacation, sick leave. Liberal personnel policy. Contact Robert Schlitt, Director, Peninsula Cerebral Palsy Training Center, 901-24th Street, Newport News, Virginia.

STAFF PHYSICAL THERAPIST for children's rehabilitation center, primarily cerebral palsy. Careful screening program, university affiliations, teaching program, good working conditions. Salary range $3732-$4572. Address Dr. Lenox D. Baker, Medical Director, N.C. Cerebral Palsy Hospital, Durham, N.C.

WANTED: PHYSICAL THERAPIST (female) for full or part-time work in orthopedic surgeon's office. Write to Daniel B. Eck, M.D., 144 South Harrison Street, East Orange, N. J.

WANTED: Full time physical therapist. Work divided between United Cerebral Palsy Center and orthopedic surgeon. Salary open. For further information write Dr. William D. Monger, 414 E. Main Street, Lancaster, Ohio.

STAFF PHYSICAL THERAPIST for position in 250-bed general hospital; 40-hour week, vacation with pay, sick leave, insurance benefits. Starting salary $400 per month, $25 increases thereafter. Apply L. W. Brouhard, 162 Clinton St., Redwood City, Calif. or EM 9-0379.

Qualified STAFF PHYSICAL THERAPIST. Female preferred; 450-bed hospital, 40-hr. week. Social Security, sick leave and holiday benefits. Three weeks' vacation. Salary open. Apply: Personnel Office, Lancaster General Hospital, 525 North Duke Street, Lancaster, Pennsylvania.

STAFF OPENING: Out-pt treatment center, mainly C. P. Salary commensurate with experience, 5-day, 40-hr. wk., pd. vacation, sick leave, regular salary increments, opportunity for in-service training. Recent graduate considered. Contact: R. R. Taylor, Jr., M.D. Curative Work Shop Inc., Pueblo, Colorado.

WANTED: Qualified physical therapist for well equipped department in a modern 350-bed general hospital. Paid vacation, sick leave, 6 holidays, salary open. Apply Sister Mary Aquin, Administrator, St. Rita's Hospital, Lima, Ohio.

PHYSICAL THERAPISTS. Attractive openings in public health field. Good starting salary with annual increments, liberal sick leave, vacation and retirement plans. Apply Donald M. Neff, Personnel Officer, County of Erie, 210 Pearl Street Bldg., Buffalo 2, N. Y.

EXPERIENCED PHYSICAL THERAPIST, either male or female, to serve as Director and physical therapist at a Cerebral Palsy Treatment Center. Address all communications to Mrs. C. E. Schmidt, President Bell County Society for Crippled Children, 216 West Avenue H, Temple, Texas.

PHYSICAL THERAPIST: Male or female, experienced, to head new dept. in gen. hosp. 355 beds. Consultation from City Rehabilitation Center. Address replies to Box 43 care of the Physical Therapy Review, 1790 Broadway, New York 19, N. Y.

REGISTERED STAFF PHYSICAL THERAPIST for 140-bed hospital. Emphasis on rehabilitating children. Valuable experience in muscle testing; clinical teaching; outpatient program. Salary and personnel policies furnished on request. Apply Physical Director, N. C. Orthopedic Hospital, Gastonia, N. C.

Positions Available

PHYSICAL THERAPIST:

$4718 to $5198; 40 hours. Interesting position at large general hospital 10 miles west of Detroit; many fringe benefits. Must have completed an approved course in Physical Therapy. Apply: Personnel Office, Wayne County General Hospital and Infirmary, Eloise, Michigan. LO 1-1700.

PHYSICAL THERAPIST—Continue your career in Ventura County, a pleasant So. California coastal area. Position at Ventura General Hospital requires eligibility for P.T. registration with Calif. Board of Medical Examiners. Salary range, $366-445 per month. Liberal vacation and sick leave benefits, social security. Apply Personnel Dept., Court House, Ventura, Calif.

PHYSICAL THERAPIST—New York Polyclinic Medical School and Hospital expanding physical medicine and rehabilitation dept. General rehab. problems. Good salary with increments, sick leave, paid vacations, partial maintenance. Apply Personnel Office, 345 W. 50 St., N.Y. 19, N.Y., CO 5-8021.

PHYSICAL THERAPIST: Male or female for Physical Medicine and Rehabilitation Department in 500-bed general hospital. Forty hour week, three weeks vacation, sick leave and other benefits. Write: Herman J. Bearzy, M.D., Miami Valley Hospital, Dayton 9, Ohio.

Opening for Staff Physical Therapist in outpatient Rehabilitation Center directed by physiatrist. Wide variety of treatment program. Coordinated physical, occupational, speech-hearing, psychological, vocational, and social services. Excellent personnel policies; up to 3 weeks' vacation. Contact R. A. Silvanik, Administrator, The Rehabilitation Center of Summit County, Inc., 326 Locust Street, Akron 2, Ohio.

Opening for second registered physical therapist, Nov. 15, in Cerebral Palsy School in new air-conditioned building. Liberal personnel policies. Salary commensurate with qualifications. Write: Mrs. A. M. Inman, Director, 1601 Gatewood Ave., Greensboro, N. C.

STAFF PHYSICAL THERAPIST, no experience necessary. Position available February 15, 1959 in new department, well-equipped, located in the new wing of an 800-bed general hospital. Forty-hr. week, 3 weeks paid vacation, laundry of uniforms, sick leave. Starting salary $4200.00. Medical Director of Department is orthopedist in advisory capacity. Miss Irene Bush, M.A., R.P.T., Head of P.T. Department, Hillcrest Medical Center, Tulsa, Oklahoma.

WANTED: PHYSICAL THERAPIST, EXPERIENCED to take charge beautiful new completely equipped department in hospital in Kankakee, community of 30,000 located 45 miles S.W. of Chicago. This is a real opportunity because Kankakee has no Physical Medicine at present and 30,000 folks are ready and waiting for this department. Salary commensurate with qualifications. Contact Sr. Mary Anselm, Administrator, St. Mary's Hospital, Kankakee, Ill.

WANTED: FEMALE registered physical therapist for busy office of 2 orthopedic surgeons Los Angeles area. Financial arrangements open. Write Robt B. Portis, M.D., 450 N. Bedford Dr., Beverly Hills, Calif.

WANTED: Registered Physical Therapist. Private nonprofit general hospital, 565 beds, with an additional 39 beds in a new chronic care unit. All modalities of treatment administered. Salary dependent on experience, five day week, liberal employee benefits. Write c/o Box 525, The Physical Therapy Review, 1790 Broadway, New York 19, New York.

QUALIFIED PHYSICAL THERAPIST for staff position in a 410-bed hospital. Completely remodeled and well equipped department, wide variety of cases divided equally between hospital and outpatient. Forty hour week, paid vacation, sick leave and holidays; salary open, depending upon qualifications and experience. Excellent opportunity in a growing community located in the Valley of the Sun, winter capitol of the Southwest. Apply Personnel Director, Good Samaritan Hospital, Phoenix, Arizona.

GRADUATES OF APPROVED SCHOOLS FOR PHYSICAL THERAPISTS. California has positions open in State Hospitals, the Veterans Home and special schools for handicapped children. Require registration with California Medical Board. Liberal employee benefits and retirement plan. No experience needed to start at $415 in mental hospitals and Veterans Home; promotional opportunities to $530. Streamlined examinations twice a month in San Francisco and Los Angeles. Write State Personnel Board, 801 Capitol Avenue, PT 71, Sacramento, California.

(continued on next page)

Classified WANT-ADS

RATES

The rate per insertion is $1.00 per line. Typewrite your advertisement carefully and count 50 characters and spaces per line.

ALL WANT-ADS MUST BE PAID FOR IN ADVANCE. Make checks or money orders payable to the American Physical Therapy Association.

Closing date for copy and cancellations is two months preceding publication date.

Institutions or physical therapists who do not wish their identity known may arrange for Blind Ad Code No. All such want-ads must include the following which will be counted as 2 lines:

Address replies to ..... care of **The Physical Therapy Review, 1790 Broadway, New York 19, N. Y.**

IMPORTANT

It is understood and agreed that the publisher shall have the right to reject or change the wording of any advertisement which in the opinion of the Editorial Board shall not be in agreement with the ethical standing of this publication.

Positions Available

IMMEDIATE PLACEMENT for a qualified staff physical therapist; 300-bed hospital; outpatients as well as hospital cases. Recent graduates will be considered. Apply Physical Therapy Department, St. Anthony's Hospital, St. Petersburg, Florida.

WANTED: SUPERVISOR FOR PHYSICAL THERAPY DEPARTMENT, preferably wth experience with children. To work with children up to 21 years of age. Graduate of accredited school. Good starting salary with regular increases, forty hour week, paid vacation, sick leave; 100-bed orthopedic hospital, new modern equipment. Write Miss Anna B. Quinn, R.N., Administrator, Kosair Crippled Children Hospital, 982 Eastern Parkway, Louisville 17, Kentucky.

WANTED: PHYSICAL THERAPIST for air-conditioned orthopedic school with medical advisors. Working day 8 to 3, 5 days a week, nine months. Beginning salary without experience $3775 with yearly increase. Mrs. Elsie Hayden, Principal, Caddo School for Exceptional Children, Shreveport, Louisiana.

WANTED: QUALIFIED PHYSICAL THERAPISTS, 500-bed, modern, general chronic disease hospital, salary dependent on experience; liberal vacations and sick leave benefits. Lunches provided. Apply Executive Director, St. Barnabas Hospital, New York 57, New York.

REGISTERED PHYSICAL THERAPIST (Female). For modern industrial hospital, working under direction of orthopedist. Attractive starting salary, periodic increases. Excellent company benefits; 5-day week. Uniforms furnished. Write Dr. J. F. McCahan, Medical Director, Western Electric Co., Hawthorne Station, Chicago 23, Illinois.

STAFF OPENING: Second registered physical therapist. Modern 300-bed general hospital; 40-hour week; liberal personnel policies. Salary commensurate with experience. Write to Personnel Office, The Stamford Hospital, Stamford, Conn.

STAFF REGISTERED physical therapist for well equipped department in 325-bed community general hospital; Crippled Children's Bureau affiliation. Excellent working conditions and personnel policies. Attractive salary. Prefer female therapist. Apply Personnel Office, Roanoke Memorial Hospital, Roanoke, Virginia.

PHYSICAL THERAPIST

325-bed general university hospital affiliation with medical school and nursing school in suburban Atlanta, Georgia. Department of Physical Medicine under direction of Dr. Robert Bennett. Air-conditioned. Predominantly neuromuscular cases with pool for underwater therapy. Excellent benefits including 2-3 weeks vacation, sick leave, Social Security, life insurance, hospitalization insurance and other benefits. Starting salary dependent upon experience of applicant; 40-hour week. Must be registered with the APTA and the Registry. For further information or application contact Personnel Office, Room 203 Administration Building, Emory University, Atlanta 22, Georgia.

Henry Ford Hospital, Detroit, Michigan has an opening for a staff therapist. 5-day wk., all holidays, group insurance, and retirement benefits. Daily inservice staff training program. Complete cross-section of medical and surgical disabilities treated. Department under direction of a physiatrist. Write to Dr. Wm. C. Schaefer, Division of Physical Medicine and Rehabilitation.

Wanted: Female Physical Therapist, recent graduate. Excellent salary, Orthopedic office—will spend 2 days in State Convalescent Hospital—will be pioneer as no Physical Therapist is in City and department should expand rapidly. Write to Dr. G. R. Dawson, Jr., 251 W. Palmetto Street, Florence, S.C.

Immediate placement for additional qualified physical therapists (male or female) for physical medicine and rehabilitation institute serving 2 hospitals in largest centrally located industrial center in Illinois. Full time medical supervision, 5-day 40-hour week, excellent salary range, additional benefits. Write: Business Manager, Institute of Physical Medicine and Rehabilitation, 619 N. Glen Oak Ave., Peoria, Illinois.

REGISTERED STAFF THERAPIST needed for a new P.T. Department in a 250-bed general hospital; sick leave, two weeks paid vacation, 40-hour week; starting salary $350 to $500/mo; Social Security, group participating Blue Cross-Blue Shield. Baptist Hospital, Beaumont, Texas.

POSITION AVAILABLE for a qualified physical therapist for generalized program and home visiting; car furnished, good salary, liberal vacation and sick leave policies. Apply Miss Ethel Turner, Director, The Instructive Visiting Nurse Association, 1601 Bolton Street, Baltimore 17, Maryland.

STAFF PHYSICAL THERAPIST—recent graduate acceptable. In-service training. Salary commensurate with experience. Liberal vacation, holidays and sick leave; 37½ hour week. Apply: Physical Medicine and Rehabilitation Dept., Mount Sinai Hospital, New York City. TRafalgar 6-1000, Ext. 317 or 318.

REGISTERED THERAPIST for staff position in rehabilitation work in a north Chicago modern 350-bed general hospital with a 50-bed rehabilitation wing. Salary commensurate with experience. Contact Ward M. Edwards, RPT, Swedish Covenant Hospital, 5145 N. Calif., Chicago 25, Ill.

QUALIFIED PHYSICAL THERAPIST in a well equipped Physical Therapy Dept. of general hospital. Hospital is modern, completely air-conditioned, located 15 minutes from downtown New Orleans. Starting salary commensurate with experience and qualifications, regular increments; 40-hour week, paid vacations, holidays, sick leave, hospitalization, laundry, retirement plan and other fringe benefits. Apply: Personnel Manager, Ochsner Foundation Hospital, 1516 Jefferson Highway, New Orleans, Louisiana.

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